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# CONFIDENTIAL Modified Handling Authorized

## TM 9-1430-257-20

### DEPARTMENT OF THE ARMY TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE MANUAL:

UNIT SCHEMATICS: ACQUISITION RADAR SYSTEM (LESS HIPAR)

(NIKE-HERCULES AND IMPROVED NIKE-HERCULES)

AIR DEFENSE GUIDED MISSILE SYSTEMS AND NIKE-HERCULES

ANTI-TACTICAL BALLISTIC MISSILE (ATBM) SYSTEMS) (U)

This copy is a reprint which includes current pages from Changes 1 through 12. Pages applying to all systems are inserted in proper numerical order in the manual. Pen and ink changes have been made. Pages which have different effectivities are inserted in the front of the manual; read the instructions concerning these pages before using the manual.

The classification was changed by Change 2 to—  
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This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C., Sections 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law



HEADQUARTERS, DEPARTMENT OF THE ARMY  
OCTOBER 1959

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Downgraded at 3-Year Intervals:  
Declassified After 12 Years  
DOD Dir 5200.10



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## READ THESE INSTRUCTIONS CAREFULLY

1. Upon receipt of these changes Modified Handling of this CONFIDENTIAL technical manual is authorized.

2. These instructions pertain only to those pages which have different effectivities.

3. The effectivity columns in paragraph 4 indicate the production cut-in serial number of material which has been modified, and the DA MWO which contains instructions for modifying existing material produced prior to this production cut-in serial number. Process these pages as follows:

a. If the serial number of the materiel in use is of the applicable production cut-in serial number or higher, apply changes as indicated in paragraph 4.

b. If the serial number of the materiel in use is below the applicable production cut-in serial number, and the pertinent DA MWO has been accomplished, apply changes as indicated in paragraph 4.

c. If the serial number of the materiel in use is below the applicable production cut-in serial number, but the pertinent DA MWO has not been accomplished, do not change the manual until such time as the modification is completed. Retain the change pages with this instruction sheet in the front of the manual. After the modification is completed, apply the changes as indicated in paragraph 4.

4. In accordance with the instructions contained in paragraph 3, the new pages, as enumerated below, will be inserted in the manual and the old pages will be removed. The material on a new or revised page affected by these changes is indicated by a vertical line in the margin of the page. Added or revised illustrations are indicated by a vertical line adjacent to the RA PD or ORD G number.

Old pages	New Pages	Effectivity	
		DA MWO	Production cut-in serial No.
21-38	21-38	Y28-W35 & Y39-W23 <i>Fail</i>	None
41-44	41-44	Y28-W35 & Y39-W23 <i>Fail</i>	None
45, 46	45, 46	+ 9-1430-251-30/8 <i>PL</i>	1363
46.1	46.1	Y28-W35 & Y39-W23 <i>Fail</i>	None
53, 54	53, 54	+ Y28-W37 <i>PL</i>	1071

85-88	85-88	+ 9-1430-251-30/11 <i>Fail</i>	1363 <i>PL</i>
105-112	105-112	+ 9-1430-251-30/6 <i>Fail</i> Y28-W35 & Y39-W23 <i>Fail</i>	None <i>PL</i>
117, 118	117, 118	+ 9-1430-251-30/6 <i>Fail</i>	None <i>PL</i>
175-178	175-178	Y28-W35 & Y39-W23 <i>Fail</i>	1347
217, 218	217, 218	9-1430-254-30/1/1	1363
220.1-220.4	220.1-220.3	9-1430-254-30/1/1	1363
241, 242	241, 242	9-1430-251-30/15	System Suffix No. 020
		9-1400-250-50/5	None
243, 244	243	9-1400-250-50/5	None
245, 246	245	9-1400-250-50/5	None
		+ 9-1430-251-30/8 <i>Fail</i>	1363 <i>PL</i>
247-258	247, 249, 251, 253, 255, & 257	9-1400-250-50/5	None
259	259	9-1400-250-50/5	None
261	261	9-1400-250-50/5	None
263, 264	263	9-1400-250-50/5	None
265	265	9-1400-250-50/5	None
267, 268	267	9-1400-250-50/5	None
269	269	9-1400-250-50/5	None
271, 272	271	9-1400-250-50/5	None
		9-1430-251-30/15	System Suffix No. 020
273, 274	273	9-1400-250-50/5	None
275, 276	275	9-1400-250-50/5	None
		+ 9-1430-251-30/8 <i>Fail</i>	1363 <i>PL</i>
277, 278	277	9-1400-250-50/5	None

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278.1	278.1 278.2	9-1400-250-50/5	None
279-282	280, 281	9-1400-250-50/5	None
283-290, 290.1, 291, 292 295, 296	283, 285, 287, 289, 290.1, 291, 292, 295, 296	9-1400-250-50/5	None
299-301	299-301	9-1430-251-30/20	System Suffix No. 115
303, 304	303, 304	9-1430-251-30/20	System Suffix No. 115
315-320	315-317, 319, 320	9-1430-251-30/11 <i>fail</i>	1363 <i>fail</i>
323-330	323-330	9-1400-250-50/5	None
335-338	335-337	9-1400-250-50/5	None
339-354	339, 341, 343, 345, 347, 349-353	9-1400-250-50/5	None
355, 356	355, 356	9-1400-250-50/5	None
361, 362	361, 362, 362.1	9-1400-250-50/5	None
363-366	363-365	9-1400-250-50/5	None
367-369	367-369	9-1400-250-50/5	None
		9-1430-251-30/14	System Suffix No. 075
371, 372	371	9-1400-250-50/5	None
		9-1430-251-30/14	System Suffix No. 075
373, 374	373, 374.1, 374.3, 374.4	9-1400-250-50/5	None
375-378	376, 376.1, 377, 378	9-1400-250-30/20 or 9-1400-250-50/9	System Suffix No. 094

223-240, 270, 272, 302 9  
260, 262, 266, 318, 370 & 372 10  
214, 246, 248, 250, 252, 254,  
256, 258, 264, 268, 274, 276,  
278, 279, 282, 284, 286, 288  
290, 292, 338, 340, 342, 344,  
346, 348, 354, 366, 374, 380-382  
375 12

5. The following pages have been deleted by previous changes.

Pages  
4.1, 4.2, 4.3  
5-10

Change No.

4  
4

12

9

18

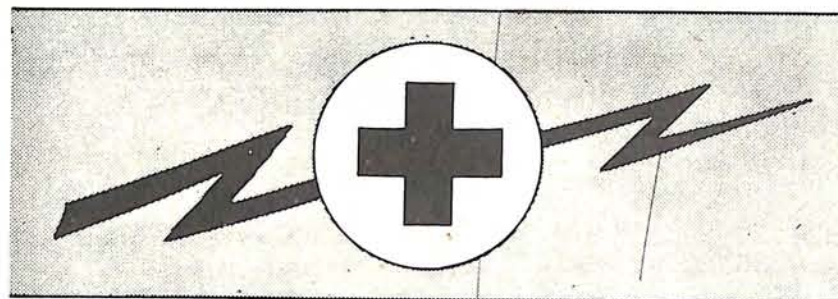
220.4

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## WARNING



RA PD 404264

### HIGH VOLTAGE

is used in the operation of this equipment

### DEATH ON CONTACT

may result if personnel fail to observe safety precautions

Be careful not to contact high-voltage connections or 115-volt ac input connections when installing or operating this equipment.

Before working inside the equipment, turn power off and ground points of high potential before touching them.

### EXTREMELY DANGEROUS POTENTIALS

exists in the following units:

Acquisition antenna-receiver-transmitter group

Acquisition modulator

Acquisition receiver-transmitter

Acquisition RF power supply control

Battery control console

PPI

Precision indicator

PPI HV power supply

Director station group

Acquisition HV power supply

-1000v power supply

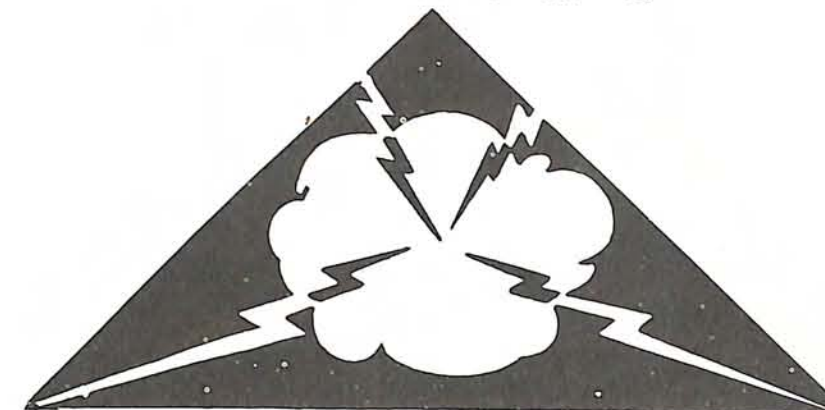
Battery control interconnecting box

Target radar control console

PPI

For Artificial Respiration, refer to FM 21-11.

## W A R N I N G



RA PD 461691

### RADIATION HAZARD

This equipment contains the following radioactive tubes:

OA2	OC3	5922
OB2	5921	5927

Refer to TB ORD 648 for safety precautions to be exercised in the presence, handling, and disposal of radioactive tubes.



## FIRST AID FOR ELECTRICAL SHOCK

## I. GENERAL

a. Rescue. In case of electric shock, shut off the high voltage at once and ground the circuits. If the high voltage cannot be turned off without delay, free the victim from contact with the live conductor as promptly as possible. Avoid direct contact with either the live conductor or the victim's body. Use a dry board, dry clothing, or other non-conductor to free the victim. An axe with a dry wooden handle may be used to cut the high-voltage wire. Use extreme caution to avoid the resulting electric flash.

b. Symptoms.

- (1) Breathing stops abruptly in electric shock if the current passes through the breathing center at the base of the brain. If the shock has not been too severe, the breath center recovers after a while and normal breathing is resumed, provided that a sufficient supply of air has been furnished meanwhile by artificial respiration.
- (2) The victim is usually very white or blue. The pulse is very weak or entirely absent and unconsciousness is complete. Burns are usually present. The victim's body may become rigid or stiff in a very few minutes. This condition is due to the action of electricity and is not to be considered rigor mortis. Artificial respiration must still be given, as several such cases are re-

ported to have recovered. The ordinary and general tests for death should never be accepted.

## II. MOUTH-TO-MOUTH ARTIFICIAL RESPIRATION

Start artificial respiration immediately. Do not wait for a mechanical resuscitator; but when an approved model is available, use it. At the same time send for a medical officer if assistance is available. Do not leave the victim unattended. Perform artificial respiration at the scene of the accident, unless the victim's or operator's life is endangered from such action. In this case only, remove the victim to another location, but no farther than is necessary for safety. If the new location is more than a few feet away, artificial respiration should be given while the victim is being moved. Artificial respiration, once started, must be continued without loss of rhythm. The mouth-to-mouth method of artificial respiration is described here.

## III. TECHNIQUE OF MOUTH-TO-MOUTH ARTIFICIAL RESPIRATION

1. Position of Victim (A). Place victim in the face upward position and kneel close to his left ear.
2. Clear the Throat. Turn the head to one side, and quickly wipe out any fluid, mucus, or foreign body from mouth and throat with the fingers.
3. Open and Aline Air Passages. Tilt the head back and extend the neck to open

and aline the air passages, so that they do not become blocked by kinking or pressure.

4. Lift Jaw Forward. Place the thumb into the mouth and grasp the jaw firmly. Lift the jaw forward to pull the tongue forward out of the air passage. Do not attempt to hold or depress tongue.

5. Pinch Nostrils Closed. Use other hand to keep the victim's nostrils pinched closed to prevent air leak.

6. Form Tight Seal with Lips (B). Rescuer's wide-open mouth completely surrounds and seals the open mouth of the victim. This is not a kissing or puckered position - the mouth of the rescuer must be wide open.

7. Blow. Exhale firmly into victim's mouth until the chest is seen to lift. This can be seen by the rescuer without difficulty.

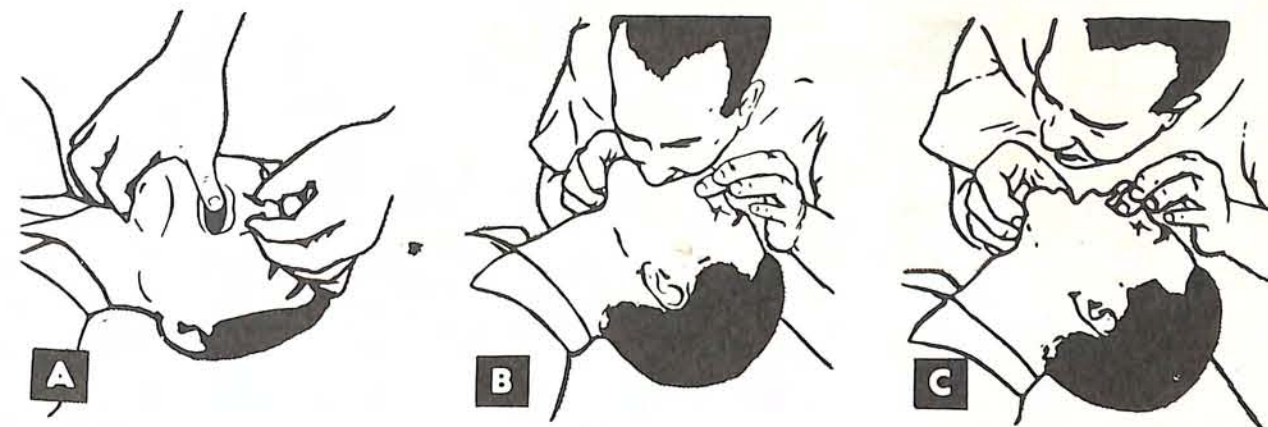
8. Remove Mouth and Breathe In (C). During this time, rescuer can hear and feel the escape of air from the victim's lungs.

9. Repeat 6, 7, and 8. Continue at a rate of 12-20 times per minute.

Caution: Excessively deep and rapid breathing by the rescuer may cause him to become faint, to tingle, and even lose consciousness. Breathing should be normal in rate with only moderate increase in volume. In this way, rescue breathing can be continued for long periods without fatigue.

10. Remember.

- a. Keep airway clear of fluid and other obstruction.
- b. Readjust position if air does not flow freely in and out of victim.
- c. Keep neck extended and chin pulled forward.
- d. Do not breathe too forcible or too large a volume if victim is infant or small child.



RA PD 461689



## TECHNICAL MANUAL

No. 9-1430-257-20

HEADQUARTERS,  
DEPARTMENT OF THE ARMY  
WASHINGTON, D. C., 7 October 1959

## UNIT SCHEMATICS ACQUISITION RADAR SYSTEM (LESS HIPAR) (U)

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\*This manual supersedes portions of TM 9-5090-3-1, 10 May 1957, including C1, 16 May 1958, and C2, 25 August 1958, as pertains to this manual.

\*\*These changes supersede TB 9-1430-257-20/1, 8 January 1960; TB 9-1430-257-20/2, 5 February 1960; TB 9-1430-257-20/3, and TB 9-1430-257-20/4, 3 March 1960.

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## CHAPTER 1 (U)

## INTRODUCTION

## Section 1 (U). GENERAL

## 1 (U). Scope

a. This technical manual is published for the use of personnel responsible for the maintenance of the acquisition antenna-receiver-transmitter group, director station group, battery control console, battery control interconnecting box, fire unit integration facility (FUIF) interconnecting box, auxiliary acquisition interconnecting box, auxiliary acquisition control interconnecting group, equipment cooling fan, and utility cabinet. The acquisition antenna-receiver-transmitter group, director station group, and portions of battery control console comprise the acquisition radar system. The battery control interconnecting box, FUIF interconnecting box, auxiliary acquisition interconnecting box, auxiliary acquisition control interconnecting group, utility cabinet, and equipment cooling fan are miscellaneous equipment contained in the trailer mounted director station. This manual contains diagrams to aid in troubleshooting and in understanding the theory of operation of the equipment.

b. These instructions form a part of a series of technical manuals on emplacement, operation, and organizational maintenance of the NIKE-HERCULES and Improved NIKE-HERCULES Air Defense Guided Missile Systems, and NIKE-HERCULES Anti-Tactical Ballistic Missile (ATBM) System. Appendix I of TM 9-1400-250-10/1 gives a list of technical manuals covering the NIKE-HERCULES System and Type 4 Equipment. Appendix I of TM 9-1400-250-10/2 gives a list of technical manuals covering the Improved NIKE-HERCULES and NIKE-HERCULES ATBM Systems.

c. This manual is technically correct up to and including NIKE-HERCULES System number 1393, System suffix serial number 160 of the Improved NIKE-HERCULES System, and the NIKE-HERCULES ATBM System. Differences due to significant production changes not covered by Department of the Army Modification Work Orders (DA MWO) are indicated by

additional diagrams, appropriate fly-sketches, and/or notes associated with the diagrams. DA MWO's included in this manual are listed below.

- (1) Y1-W11 eliminates personnel hazard. Provides "G" order calibration voltage, modifies steering order granularity, and limits steering orders to the maximum acceptability of the missile (systems 1001 through 1011).
- (2) Y25-W3 eliminates XTAL current noise (systems 1001 through 1246).
- (3) Y25-W4 prevents damage to timing relays (systems 1001 through 1306).
- (4) Y26-W2 and Y39-W11 permits the diversion of RF energy into dummy load to meet certain tactical situations by adding waveguide switch and dummy load. Remove DISABLE switch, COAST light, and TTR ATC unit (systems 1001 through 1193).
- (5) Y28-W2 permits proper AGC with all delay lines (systems 1001 through 1006).
- (6) Y28-W5 adds MK X IFF facilities at relocated IFF decoder (systems 1001 through 1090).
- (7) Y28-W6 corrects offset in-out circuit. Also compensates for residual guidance errors at guidance cut-off by increasing gain of steering orders between on-trajectory locking and guidance cut-off (systems 1001 through 1058).
- (8) Y28-W7 reduces failure of XTAL diodes (systems 1001 through 1070).
- (9) Y28-W9 corrects fusing in technical loop (systems 1001 through 1031).
- (10) Y28-W11 reduces interference in acquisition video circuit. Removes safety hazard by adding protective cover and improved interlock switch to HV

- power supply (systems 1001 through 1246).
- (11) Y28-W12 provides facilities for correcting polarity reversals in the  $A_G$  transmission circuit. Adds LINE REVERSAL switches (systems 1001 through 1062).
- (12) Y28-W21 and Y39-W9 increases range of PPI. Modifies sweep and symbol circuits, range unit, and marker generator (systems 1001 through 1048).
- (13) Y28-W23 and Y39-W14 reduces tube and capacitor failures by changing thermostat and adding preferred type capacitors (systems 1001 through 1266).
- (14) Y28-W24 and Y39-W15 provides calibration voltage for PPI symbol adjustment and provides means of balancing the plus and minus 250 volts used with FUIF. Changes regulator and adds outlet for monitoring (systems 1001 through 1218).
- (15) Y28-W28 improves system performance against maneuvering targets by altering time solution and increasing sensitivity of steering orders. Adds facilities for meters on computer control panel to show indicated error at burst. Removes NIKE-AJAX cluster and low altitude capabilities from NIKE-HERCULES systems (systems 1001 through 1266).
- (16) Y28-W29 provides improved symbol intensity control and reduces video signal changes. Relocates symbol intensity as front panel control and improves video clamping (systems 1001 through 1306).
- (17) Y28-W30 corrects wiring in FUIF interconnecting box (systems 1001 through 1183).
- (18) Y28-W34 replaces fin orders meter with present target altitude meter. Adds diode to limit voltage across thermocouple. Prevents locking of pen

- interchange relays and energizing prelaunch test relays when pen interchange switch is operated. Adds KILL switch (systems 1001 through 1306).
- (19) Y28-W35 and Y39-W23 adds facilities for 15D2 trainer (selected systems).
- (20) Y28-W36 provides facilities for fail-safe burst of prime warheads by use of safety officer burst switch. Prevents premature introduction of low elevation compensation (LEC) into missile orders. Reduces end game noise by removing missile velocity input from steering solution and steering velocity circuits. Brings wiring into agreement with panel engraving (systems 1001 through 1306).
- (21) Y28-W37 and Y42-W11 converts electronic gate to plug-in unit on PPI (systems 1001 through 1183).
- (22) Y28-W38 reduces probability of accidentally selecting SS mission by changing mission switch. Reduces probability of damaging PTA meter (systems 1001 through 1316).
- (23) Y28-W39 prevents excessive tracking rates during initial turn condition by modifying initial turn circuits. Increases system performance against midcourse target maneuvers by introducing end game order limiting. Provides proper fuse in filament circuit (systems 1001 through 1286).
- (24) Y28-W44 eliminates cross-talk and resulting degradation of MTI and eliminates mechanical interference between door handle and high voltage shield (systems 1001 through 1246).
- (25) Y39-W16 and Y28-W25 improves missile radar reliability in the presence of spurious signals. Rearranges slew and recycle circuits and changes missile reject circuit (systems 1001 through 1266).
- (26) Y39-W21 and Y28-W32 insures sync output of track synchronizer (systems 1001 through 1266).



- (27) 9-1400-250-30/12 provides test equipment compatibility and insures personnel safety by adding 3-wire grounded outlets (systems 1001 through 1385).
- (28) 9-1400-250-30/23 provides better illumination of azimuth and range indicator and prevents undesired sweep expansion in sweep generator (systems suffix serial No. 001 through 121).
- (29) 9-1400-250-30/41 modifies acquisition-track synchronizer to reduce peak sync output current and adds cathode-follower stage to permit dividing of system pre-knock load (systems 1001 through 1385).
- (30) 9-1400-250-50/5 provides anti-jam display (AJD) capabilities to Improved NIKE-HERCULES acquisition radar systems (all systems).
- (31) 9-1400-250-50/9 adds ATBM capability to the Improved NIKE-HERCULES ground guidance system (selected systems).
- (32) 9-1400-250-50/25 updates the NIKE-HERCULES system to provide compatibility with the radar signal simulator station AN/MPQ-T1 (all systems).
- (33) 9-1400-250-50/28 provides facilities for connecting radar signal simulator station AN/MPQ-T1 (T1 Trainer) and adds functions for annual service practice to the Improved NIKE-HERCULES System. Also provides facilities and adds functions for system compatibility with the auxiliary acquisition radar (AAR) and the ECCM console (systems suffix serial No. 001 through 159, 162, 163, 169, 180, 181, 183 through 185).
- (34) 9-1400-261-30 converts NIKE-HERCULES Guided Missile System to Improved NIKE-HERCULES Guided Missile System (selected systems).
- (35) 9-1400-263-50 adapts the radar course directing central for auxiliary acquisition radar (AAR) (selected systems).
- (36) 9-1400-267-30 prevents shorting of negative voltage to ground, and eliminates shock hazard to personnel by adding insulated washers and sleeving to filter capacitors in power supplies (systems 1001 through 1362).
- (37) 9-1400-268-50 provides anti-jam display (AJD) capability to NIKE-HERCULES acquisition radar system (selected systems).
- (38) 9-1400-291-50 changes the director-computer group in the Improved NIKE-HERCULES System to be compatible with the HIPAR anti-jam display (AJD) facilities (systems 001 through 008).
- (39) 9-1400-251-30/6 prevents the 1550-volt interlock on the acquisition power control panel from being accidentally overridden when the HV switch is in the OFF position (systems 1001 through 1362).
- (40) 9-1430-251-30/8 provides facilities for adding radar bomb scoring equipment to the trailer mounted director station (selected systems).
- (41) 9-1430-251-30/11 modifies feedback circuit in target designate control-indicator so acquisition range rate may be adjusted to desired limits (systems: HERCULES 1001 through 1362; INH, all).
- (42) 9-1430-251-30/13 adds fuse holder and spare fuses to power distribution panel; also adds spare fuses to director station group (systems 1001 through 1362).
- (43) 9-1430-251-30/14 minimizes 400-cps beat frequency interference between auxiliary acquisition radar (AAR) or HIPAR and the Improved NIKE-HERCULES system (systems suffix serial No. 001 through 074).
- (44) 9-1430-251-30/15 corrects inoperative wiring condition in trailer mounted director station (systems 001 through 019).
- (45) 9-1430-251-30/16 improves tactical signaling and FUIF displays by adding VALIDITY switch and by adding BOTH switch position to control indicator. Replaces HV connectors and eliminates safety hazard and capacitor failure in azimuth and range indicator (systems 1001 through 1385).
- (46) 9-1430-251-30/18 improves the readability of the acquisition range, gyro azimuth, and elevation scan dials in the battery control console during blackout (systems 1001 through 1385).
- (47) 9-1430-251-30/20 prevents integration of acquisition bypass video and eliminates video smearing on azimuth and range indicator (systems suffix serial No. 001 through 114).
- (48) 9-1430-251-30/25 reduces zero set drift in sweep generator and to displace FUIF symbols from PPI center during checks and adjustments to allow use of cathode-ray tubes which are burned in the center (systems 1001 through 1385).
- (49) 9-1430-251-30/26 provides an INH ground guidance system that will be compatible with the incorporation of EFS in HIPAR by replacing the auxiliary HIPAR control-indicator (systems suffix serial No. 001 through 098).
- (50) 9-1430-251-30/29 equalizes video signal-to-noise ratio for LOPAR and HIPAR or AAR; eliminates need for PPI and "B" scope readjustment each time video input is switched; and eliminates resistor overload (systems suffix serial No. 001 through 139).
- (51) 9-1430-251-34/1 facilitates removal of PPI by adding counterweight spring in console. Eliminates noise in A<sub>c</sub> circuit by grounding floating shield (systems 1001 through 1362).
- (52) 9-1430-254-30/1/1 prevents acquisition primary actuator motor from coasting (systems 1307 through 1362).
- (53) 9-1430-254-30/1/5 adds RF filter to reduce interference between TD-2 communication system and the RCDC (selected systems).

d. For a complete listing of Department of the Army modification work orders applicable to the acquisition radar system, refer to DA PAM 310-4.

e. Table I contains an alphabetical listing of technical manual nomenclature used in this manual with a cross-reference to official nomenclature. Items with the same technical manual and official nomenclature have been omitted from this table.



Table I (U). Nomenclature Cross-Reference (U)

TM nomenclature	Official nomenclature
+2v power supply	Power supply (+2v)
+2.5kv power supply	Power supply
-3.3kv power supply	Power supply
4-kc oscillator	Audio frequency oscillator
+4kv control regulator	Control regulator
+4kv transformer	Transformer
5-minute delay timer	Interval timer
5-minute delay timer	Interval timer TD-117/M
8-kv power supply	Power supply
+9v filament power supply	Power supply
15-minute delay timer	Interval timer TD-115/M
20-30 second delay timer	Interval timer TD-114/M
-28v power supply	Power supply
+75 volt regulator	Voltage regulator CN-291/MS
120 volt regulator	Voltage regulator CN-286/M
-200 volt regulator	Voltage regulator CN-290/M
+220v power supply	Power supply
-250, +250, or +150 volt regulator	Voltage regulator CN-281/M
-250v reference power supply	Power supply
+250 or +150 volt regulator	Voltage regulator
+250 or +150 volt regulator	Voltage regulator CN-280/M
+250 volt regulator	Voltage regulator CN-292/M
+270v, -28v, and +75v or 175v power supply	Power supply
+250v, -28v, and +75v or +175v power supply	Power supply PP-1161A/M
±320 or +220v power supply	Power supply PP-1160A/M
±320 or +220v power supply	Power supply PP-1160B/M
+350v power supply	Power supply (+350v)
400-cps oscillator	Audio frequency oscillator
400-cps oscillator	Audio frequency oscillator 0-312/M
+450v and +250v power supply	Power supply PP-1178/M
-500v bias power supply	Power supply (-500v)
-500v power supply	Power supply (500v)
600v power supply	Power supply
-1000v power supply	Power supply

Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
+2500v or +5000v power supply	Power supply (2500/5000v)
Acquire aid amplifier	Audio frequency amplifier
Acquisition AFC	Receiver control
Acquisition antenna	Antenna AS-980/T
Acquisition antenna	Antenna AT-779/T
Acquisition antenna drive	Antenna drive
Acquisition antenna lifting harness	Harness assembly
Acquisition antenna pedestal	Antenna pedestal
Acquisition antenna pedestal	Antenna pedestal AB-545/T
Acquisition antenna pedestal	Antenna pedestal AB-544/T
Acquisition antenna trailer	Acquisition antenna trailer equipped
Acquisition antenna-receiver-transmitter group	Acquisition antenna-receiver-transmitter group OA-1601/T
Acquisition antenna-receiver-transmitter group	Acquisition antenna-receiver-transmitter group OA-1596/T
Acquisition control-indicator	Control-indicator
Acquisition control-indicator	Control-indicator (acquisition and IFF)
Acquisition duplexer	Duplexer
Acquisition HV power supply	Power supply PP-1162/MS
Acquisition IF amplifier	Intermediate frequency amplifier AM-1062/MS
Acquisition IF preamplifier	Intermediate frequency amplifier AM-1059/MS
Acquisition interference suppressor	Interference suppressor
Acquisition modulator	Radar modulator MD-311/T
Acquisition orientation level	Surveying level TS-844/MS
Acquisition power control panel	Power distribution panel
Acquisition range generator	Pulse generator
Acquisition range generator	Pulse-sweep generator
Acquisition receiver-transmitter	Radar receiver-transmitter RT-430/T
Acquisition RF power supply control	Power supply control
Acquisition slip ring	Slip ring
Acquisition-track synchronizer	Electrical synchronizer



Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
Acquisition trigger amplifier	Trigger amplifier
AFC-AGC control-indicator	Control-indicator
AFC IF pre amplifier	Intermediate frequency amplifier
A <sub>c</sub> , B, and T <sub>u</sub> computer	Ballistics computer
AGC	Receiver control
AGC monitor amplifier	Electronic control
AGC monitor amplifier	Electronic control amplifier AM-1087/M
AJD fixed attenuator	Fixed attenuator
Altitude plotting board	Computer data plotting board (altitude)
Angle error detector	Radio frequency detector
Angle modulator amplifier	Electronic control amplifier
Antenna-mast group OA-1600/T	Collimation antenna-mast group OA-1600/T
Antenna mount drop bed trailer	Antenna mount low bed trailer XM406
Antenna mount drop bed trailer	4 wheel antenna trailer XM-406E1
Antenna pedestal leg	Antenna pedestal leg MT-1448/MS
Auxiliary acquisition cabinet	Electrical equipment cabinet
Auxiliary acquisition control-indicator	Control-indicator
Auxiliary acquisition control interconnecting group	Control interconnecting group
Auxiliary acquisition interconnecting box	Interconnecting box
Auxiliary acquisition interconnecting box cover	Interconnecting box cover
Auxiliary acquisition relay assembly	Relay assembly
Auxiliary electronic frequency converter	Electronic frequency converter
Auxiliary fire control-indicator	Fire (auxiliary) control-indicator
Auxiliary resolver amplifier	Electronic control amplifier
Azimuth and elevation deviation indicator	Azimuth and elevation deviation indicator ID-429/M
Azimuth and range position amplifier	Direct current amplifier
Azimuth blank generator	Pulse generator
Azimuth correction transmitter	Azimuth correction data transmitter
Azimuth indicator	Track azimuth indicator
Azimuth intermediate drive control	Antenna control C-1471/M
Azimuth position transmitter	Position transmitter
Azimuth sweep generator mixer stage	Sweep control mixer stage CV-318/M
B scope indicator	Azimuth and range indicator
B scope marker generator	Electronic marker generator
B scope modulation eliminator	Modulation eliminator
B scope sweep amplifier	Direct current amplifier
B scope sweep generator	Sweep generator
B scope video amplifier	Video amplifier
Ballistic resistor assembly	Resistor assembly
Battery command radar coder	Radar coder
Battery control cabinet	Electrical equipment cabinet
Battery control cabinet	Electrical equipment cabinet CY-1627A/MSA-7
Battery control console	Battery control console OA-1481/MSA-19
Battery control console	Guided missile battery control console
Battery control interconnecting box	Interconnecting box J-850/MSA-19
Battery control interconnecting box housing	Junction box housing
Battery signal panel-indicator	Panel-indicator
Battery status relay assembly	Relay assembly
Beacon track AFC	Electrical frequency control
Beacon track AFC	Receiver control C-1481/MPA-4
Burst error amplifier	Electronic control amplifier
Burst generator	Pulse generator O-304/M
Cable interconnecting group	Interconnecting group
Carrier oscillator	Radio frequency oscillator
Climb and turn computer	Ballistics computer
Cluster relay assembly	Relay assembly
Coder control indicator	Control indicator

Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
Coder electrical synchronizer	Electrical synchronizer
Combining amplifier	Mixer stage amplifier
Command oscilloscope	Oscilloscope OS-49/M
Compressor	Motor driven reciprocating compressor
Compressor-dehydrator	Electronic equipment compressor-dehydrator
Computer amplifier-relay cabinet	Electrical equipment cabinet
Computer amplifier-relay group	Amplifier-relay group
Computer amplifier-relay group	Amplifier-relay group OA-1915/MSA-19
Computer conditioning relay assembly	Relay assembly (computer conditioning)
Computer control-panel	Control-panel
Computer group	Ballistics data computer group
Computer group	Ballistics data computer group OA-1482/MSA-19
Computer power cabinet	Electrical equipment cabinet
Computer power supply group	Power supply group OA-1527/MSA-19
Computer servo cabinet	Electrical equipment cabinet
Computer standby interval timer	Interval timer (computer standby)
Computing amplifier	Direct current amplifier AM-1093/M
Computing amplifier control	Amplifier control
Computing modulator	Data modulator MD-242/MS
Countermeasures control-indicator	Control-indicator
Countermeasures range sweep generator	Pulse-sweep generator
Countermeasures video amplifier	Video amplifier
Delay amplifier	Intermediate frequency amplifier
Director-computer group	Guided missile director-computer group
Director-computer group	Director-computer group OA-1479/MSA-19
Director station cabinet	Electrical equipment cabinet
Director station group	Director station group OA-1480/MSA-19
Director station group	Guided missile director station group
Director station trailer	Guided missile director station trailer
Director station trailer	4 wheel guided missile director station trailer M424E1
Director station trailer	Director station van trailer XM424
Early warning plotting board	Radar data plotting board
Early warning plotting board	Radar data plotting board PT-414/MSA-19
Electric light control	Electric light control C-1473/M
Electro-mechanical control box	Control box
Electro-mechanical control panel	Control panel
Electronic frequency discriminator	Electronic frequency discriminator
Elevation correction transmitter	Elevation correction data transmitter
Elevation indicator	Track elevation indicator
Elevation intermediate drive control	Antenna control C-1470/M
Elevation position transmitter	Position transmitter
Equipment cooling cabinet	Electrical equipment cabinet
Equipment cooling cabinet	Equipment cooling cabinet CY-2087/M
Equipment cooling fan	Centrifugal fan HD-167/M
Equipment status relay assembly	Relay assembly
Error pulse converter	Waveform converter
Fast AGC amplifier	Control amplifier
Frequency divider generator	Pulse generator O-301/M
Frequency generator	Pulse generator O-300A/M
Front dolly	Front trailer dolly
Front dolly	Director station front trailer dolly
Front dolly	Radar tracking front trailer dolly
Front dolly	Antenna mount front trailer dolly
FUIF fixed attenuator	Fixed attenuator
FUIF interconnecting box	Interconnecting box
FUIF interconnecting box	Interconnecting box J-851/MSA-19
FUIF interconnecting box cover	Interconnecting box cover



Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
FUIF interconnecting box cover	Interconnecting box cover CW-439/MSA-19
FUIF relay assembly	Relay assembly
Fuse and control panel	Fuse panel
Gasoline burner	Heating gasoline burner
Gong control relay assembly	Relay assembly RE-171/M
Gyro azimuth line amplifier-network	Amplifier-network AM-1100/M
Gyro azimuth resolver amplifier	Electronic control amplifier AM-1102/MSA-7
Gyro azimuth transformer	Audio frequency transformer
Handwheel drive control	Antenna control C-1469/M
Heater assembly control	Gasoline burner combustion control
Heater assembly control unit	Heater control unit
High-power servo amplifier	Electronic control amplifier (high power)
HIPAR auxiliary control-indicator	Control-indicator
HIPAR control-indicator	Control-indicator
Horizontal plotting board	Computer data plotting board (horizontal range)
HV regulator	Regulator
Hydraulic control relay assembly	Relay assembly
IF amplifier	Intermediate frequency amplifier
IF amplifier switch	Radio frequency transmission line switch
IF pre amplifier	Intermediate frequency amplifier
IF pre amplifier	Intermediate frequency amplifier AM-1108/M
IFF auxiliary control-indicator	Control-indicator
IFF control-indicator	Control-indicator
Initial turn control relay assembly	Relay assembly (initial turn control)
Initial turn relay assembly	Relay assembly
Interference suppressor pulse amplifier-generator	Amplifier-generator
Keep alive power supply	Power supply
Launcher position-control	Antenna control C-1482/M
Local antenna control	Antenna control C-1495/M
LOPAR auxiliary control-indicator	Control-indicator
LOPAR control-indicator	Control-indicator
LOPAR relay assembly	Relay assembly
Low altitude relay assembly	Relay assembly (low altitude)
Low-power servo amplifier	Electronic control amplifier AM-1056/M
Magnetron filament voltage regulator	Voltage regulator
Main acquisition IF amplifier	Intermediate frequency amplifier
Main electronic frequency converter	Electronic frequency converter
Mark generator	Pulse generator
Mark relay assembly	Relay assembly RE-187A/M
Meter and channel control-indicator	Control-indicator
Meter control-indicator	Control-indicator
Meter panel	Indicator panel
Missile azimuth coupling resistor assembly	Missile azimuth resistor assembly
Missile control-indicator group	Control-indicator group
Missile elevation coupling resistor assembly	Missile elevation resistor assembly
Missile oscillator	RF oscillator
Missile radar control cabinet	Electrical equipment cabinet
Missile radar control console	Radar control console OA-1341/MPA
Missile range coupling resistor assembly	Missile range resistor assembly
Missile track antenna-receiver-transmitter	Missile tracking antenna-receiver-transmitter OA-1486/MPA
Missile track antenna-receiver-transmitter group	Missile tracking antenna-receiver-transmitter group OA-1485/MPA
Missile track control power supply	Power supply
Missile track indicator	Azimuth and elevation indicator
Missile track indicator	Azimuth and elevation indicator ID-430/MPA-4
Missile track receiver-transmitter	Radar receiver-transmitter

Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
Missile track slew control amplifier	Electronic control amplifier AM-1086A/M
Missile video and IF switching amplifier	Detector amplifier
Mission order select relay assembly	Relay assembly (mission order select)
Mission select relay assembly	Relay assembly (mission select)
Modulator control-indicator	Control-indicator (modulator)
Motor burn-out—burst relay assembly	Relay assembly (MBO—burst)
Motor burn-out timer	Interval timer (motor burning)
MTI delay line	Delay line (ultrasonic)
MTI oscilloscope	Oscilloscope
MTI synchronizer	Electrical synchronizer
MTI video amplifier	Video amplifier
Multichannel data recorder	Multi-channel data recorder
Panoramic directional coupler	Directional coupler
Panoramic sweep generator	Pulse-sweep generator
Panoramic video detector	Video signal detector
Pen control relay assembly	Relay assembly
Pen control relay assembly	Relay assembly RE-189/M
Pen limit relay assembly	Relay assembly RE-170/M
Personnel heater	Vehicle mounting duct type heater HD-164/M
Personnel heater	Vehicular compartment heater HD-365/M
Personnel heater cabinet	Electrical equipment cabinet
Personnel heater cabinet	Heating and ventilating cabinet
Pitch generator	Pulse generator O-306/M
Plot data select relay assembly	Relay assembly RE-178/M
Position difference relay assembly	Relay assembly (position difference)
Power directional coupler	Directional coupler
Power monitor	Radio frequency monitor ID-433/M
Power relay control	Power supply control
Power transformer	Power step-up transformer
PPI	Azimuth and range indicator
PPI dc amplifier	Direct current amplifier
PPI demodulator amplifier-mixer stage	Amplifier-mixer stage AM-1073/M
PPI HV power supply	Power supply
PPI marker generator	Electronic marker generator
PPI sweep amplifier	Audio frequency amplifier AM-1074/M
PPI sweep generator mixer stage	Sweep control mixer stage
PPI test panel	Electrical test panel
PPI video amplifier	Video amplifier
Precision indicator	Azimuth and range indicator
Precision mark generator	Pulse generator
Precision video amplifier	Video amplifier AM-1076/M
Precision zero-set indicator control group	Indicator control group OA-736/M
Prelaunch switching relay assembly	Relay assembly (pre-launch switching)
Primary actuator	Linear electro-mechanical actuator
Primary hydraulic cylinder	Antenna reflector hydraulic cylinder
Pulse repetition generator	Pulse generator O-303/M
Pulse repetition generator	Pulse generator (repetition)
Radar coder set	Radar coder set KY-229/MPA
Radar coder set cabinet	Electrical equipment cabinet
Radar course directing central	NIKE-HERCULES ADGMS radar course directing central
Radar course directing central	Improved NIKE-HERCULES ADGMS radar course directing central
Radar course directing central	NIKE-HERCULES ATBM GMS radar course directing central
Radar pitch and yaw coder	Radar coder (pitch and yaw)
Radar power control-indicator	Control-indicator



Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
Radar power control panel	Power supply control panel
Radar power relay assembly	Relay assembly
Radar power supply cabinet	Electrical equipment cabinet
Radar power supply group	Power supply group
Radar power supply group	Power supply group OA-1342/MPA
Radar set group	Radar set group OA-1343/MPA
Radar set group	Radar set group OA-2251/MPA
Radar set group cabinet	Electrical equipment cabinet
Radar test set cabinet	Electrical equipment cabinet
Radar test set cabinet	Electrical equipment cabinet CY-2086/MSW
Radar test set power supply	Power supply
Radar test set pulse generator	Pulse generator
Radar test set TS-847A/MSW-1	Radar test set TS-847A/MSW-1
Radar test set waveguide assembly	Waveguide assembly
Range antenna pedestal	Antenna pedestal
Range antenna reflector	Antenna reflector
Range antenna support base	Antenna support base
Range calibrator generator	Pulse generator
Range error converter	Waveform converter
Range gate generator	Pulse generator
Range IF pre amplifier	Intermediate frequency amplifier
Range mark generator	Pulse generator
Range mark generator amplifier	Trigger amplifier
Range modulator amplifier	Electronic control amplifier
Range position transmitter	Position transmitter
Range pulse generator	Pulse generator
Range radar power control-indicator	Control-indicator
Range RF control-power supply group	Control-power supply group
Range receiver-transmitter	Radar receiver-transmitter
Range slip ring assembly	Electrical contact ring assembly
Range sweep generator	Sweep generator
Range sweep generator	Sweep generator O-294/M
Range sweep generator	Sweep generator O-294A/M
Range track video amplifier	Video amplifier
Range video detector	Video detector
Rate limiter amplifier	Direct current amplifier
Rate limiter relay assembly	Relay assembly (rate limiter)
Rear dolly	Rear trailer dolly
Rear dolly	Director station rear trailer dolly
Rear dolly	Radar tracking rear trailer dolly
Rear dolly	Antenna mount rear trailer dolly
Receiver gate generator	Pulse generator
Recorder and switchboard cabinet	Electrical equipment cabinet
Recorder group	Recorder group OA-1483/MSA-19
Rectifier power supply subassembly	Power supply subassembly
Relay amplifier	Direct current amplifier AM-1096/M
Remote control circuit	Guided missile remote control circuit MX-2631/MS
Remote magnetron metering control-indicator	Control-indicator
Remote transmitter control	Transmitter control
Resolver amplifier	Electronic control amplifier AM-1057/MS
RF bolometer	Radio frequency bolometer
RF detector	Radio frequency detector
RF detector subassembly	Radio frequency detector subassembly
RF power meter	Radio frequency power meter
RF power test set	Radio frequency power test set
Rotary coupler	Radio frequency rotary coupler
Secondary actuator	Linear electro-mechanical actuator

Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
Secondary hydraulic cylinder	Antenna reflector hydraulic cylinder
Semi-precision zero-set indicator control group	Indicator control group OA-735/M
Servo computer assembly	Computer assembly
Servo pre amplifier	Electronic control amplifier
Signal and channel relay assembly	Relay assembly (signal & channel)
Skin track AFC	Receiver control C-1496B/M
Slew relay assembly	Relay assembly
STC	Receiver control
Steering switching relay assembly	Relay assembly
Step-down power transformer	Power SD transformer
Step-down power transformer	Power transformer
Sum IF pre amplifier	Intermediate frequency amplifier AM-1106/M
Tactical control-indicator	Control-indicator (tactical)
Target antenna control group	Antenna control group
Target azimuth coupling resistor assembly	Target azimuth resistor assembly
Target azimuth coupling resistor assembly	Resistor assembly
Target data processing cabinet	Electrical equipment cabinet
Target designate control-indicator	Control-indicator
Target elevation coupling resistor assembly	Target elevation resistor assembly
Target elevation coupling resistor assembly	Resistor assembly
Target ground speed amplifier	Direct current amplifier
Target IF pre amplifier	Intermediate frequency amplifier
Target monopulse duplexer	Duplexer
Target or missile transfer control-indicator	Control-indicator
Target oscillator	RF oscillator
Target oscillator	Radio frequency oscillator
Target radar control cabinet	Electrical equipment cabinet
Target radar control console	Radar control console
Target radar control console	Radar control console OA-1484/MPA
Target range amplifier-control group	Amplifier-control group
Target range antenna-receiver-transmitter	Target ranging antenna-receiver-transmitter
Target range antenna-receiver-transmitter group	Target ranging antenna-receiver-transmitter group
Target range coupling resistor assembly	Range resistor assembly
Target range coupling resistor assembly	Target range resistor assembly
Target range coupling resistor assembly	Resistor assembly
Target range indicator	Range indicator
Target range mark generator	Pulse generator
Target range position transmitter	Position transmitter
Target range slew control amplifier	Electronic control amplifier
Target range slew control amplifier	Electronic control amplifier AM-1080/M
Target range antenna support group	Antenna support group
Target range synchronizer	Electrical synchronizer
Target range unblanking amplifier	Electronic control amplifier
Target ranging radar control	Receiver-transmitter control
Target ranging radar control cabinet	Electrical equipment cabinet
Target sweep generator	Sweep generator
Target test control	Radio beacon control
Target test control	Radio beacon control C-1472/M
Target test IF signal generator	Signal generator
Target track amplifier-converter	Electronic frequency converter
Target track antenna-receiver-transmitter	Target tracking antenna-receiver-transmitter
Target track antenna-receiver-transmitter	Target tracking antenna receiver-transmitter OA-1489/MPA
Target track antenna-receiver-transmitter group	Target tracking antenna-receiver-transmitter group
Target track antenna-receiver-transmitter group	Target tracking antenna-receiver-transmitter group OA-1488/MPA
Target track antenna support	Antenna support

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Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
Target track antenna support base	Antenna support base
Target track antenna-support group	Antenna-support group
Target track control power supply	Power supply
Target track control-power supply	Control-power supply
Target track indicator assembly	Indicator assembly
Target track indicator assembly	Indicator assembly ID-428/M
Target track range modulator amplifier	Electronic control amplifier
Target track receiver-transmitter	Radar receiver-transmitter
Target track receiver-transmitter	Radar receiver-transmitter
Target track RF control-power supply group	Control-power supply group
Target track RF oscillator	RF oscillator
Target track trigger amplifier	Trigger pulse amplifier
Target track unblanking amplifier	Electronic control amplifier
Target track video amplifier	Video amplifier
Target video amplifier	Video amplifier
Target video and IF switching amplifier	Detector amplifier
Telescope assembly	Track antenna telescope assembly
Test delay control	Simulator control C-1479/M
Test delay simulator	Radar signal simulator SM-76/M
Test IF signal generator	Signal generator O-310A/M
Test relay assembly	Relay assembly (test)
Test set monitor indicator panel	Indicator panel
Time-to-intercept computer	Ballistics computer
Track amplifier-converter	Amplifier-converter
Track antenna level	Master precision level
Track antenna pedestal	Antenna pedestal
Track antenna pedestal fairing	Antenna pedestal fairing
Track antenna radome	Track radome
Track antenna reflector assembly	Track reflector assembly
Track band pass filter	Band pass filter
Track IF amplifier	Intermediate frequency amplifier
Track IF amplifier	Intermediate frequency amplifier AM-1089/M
Track IF attenuator	Fixed attenuator
Track range amplifier-control group	Amplifier-control group
Track receiver-transmitter	Radar receiver-transmitter
Track RF control-power supply	Control-power supply
Track RF control-power supply group	Control-power supply group
Track slip ring assembly	Electrical contact ring assembly
Track sweep generator	Sweep generator O-475/MPA
Track trigger amplifier	Trigger amplifier
Track video amplifier	Video amplifier AM-1078A/M
Tracking station group	Guided missile tracking station group
Tracking station group	Tracking station group OA-1595/MPA-5
Tracking station group	Guided missile tracking station group OA-3285/MPA-6
Tracking station trailer	Radar tracking central van trailer
Tracking station trailer	Tracking station van trailer XM428
Tracking station trailer	4 wheel guided missile tracking station trailer M428E1
Trailer mounted director station	Trailer mounted director station AN/MSA-19
Trailer mounted director station	Guided missile director station
Trailer mounted director station	Trailer mounted guided missile director station
Trailer mounted missile track antenna-receiver-transmitter group	Trailer mounted missile tracking antenna-receiver-transmitter group OA-1340/MPA
Trailer mounted target track antenna-receiver-transmitter group	Trailer mounted target tracking antenna-receiver-transmitter group
Trailer mounted target track antenna-receiver-transmitter group	Trailer mounted target tracking antenna-receiver-transmitter group OA-1487/MPA

Table I (U). Nomenclature Cross-Reference—Continued (U)

TM nomenclature	Official nomenclature
Trailer mounted target range antenna-receiver-transmitter group	Trailer mounted target ranging antenna-receiver-transmitter group
Trailer mounted tracking station	Trailer mounted guided missile tracking station
Trailer mounted tracking station	Trailer mounted tracking station AN/MPA-5
Trailer mounted tracking station	Trailer mounted guided missile tracking station AN/MPA-6
Transformer and filter power supply subassembly	Power supply subassembly
Trigger pulse amplifier	Generator amplifier
Trigger pulse generator	Pulse generator
Unblanking amplifier	Electronic control amplifier AM-1077/M
Utility cabinet	Electrical storage cabinet CY-1515/M
Utility table	Radar maintenance table FN-67/M
Unequipped acquisition antenna trailer	Acquisition antenna guided missile trailer
Video and mark mixer	Video mixer
Video and mark mixer	Video mixer CV-311A/MS
Video and mark mixer	Video signal mixer
Video and phase amplifier	Detector amplifier
Video error amplifier	Trigger-video amplifier AN-1082A/M
Video time share amplifier	Trigger pulse-video amplifier
Wide-band IF amplifier	Intermediate frequency amplifier
Yaw generator	Pulse generator O-305/M
Zero-set amplifier	Audio frequency amplifier AM-1095/M
Zero-set switch	Rotary switch SA-393/M

2 (U). Contents

a. This technical manual contains schematic diagrams, apparatus lists, and voltage and resistance charts. Chapter 1 contains a description of the diagrams and voltage and resistance charts, including requirements for voltage and resistance measurements. It also explains symbols, abbreviations, waveforms, apparatus lists, relay types, and the referencing system. Chapters 2, 3, and 4 contain schematic diagrams, apparatus lists, and voltage and resistance charts. The information in chapter 2 is applicable for units peculiar to the NIKE-HERCULES Systems, and for units that are common units with the Improved NIKE-HERCULES and NIKE-HERCULES ATBM Systems. The information in chapter 3 is applicable for units peculiar to the Improved NIKE-HERCULES Systems, and for units that are common units with the NIKE-HERCULES ATBM Systems. Chapter 4 is applicable to units peculiar to the NIKE-HERCULES ATBM Systems. Personnel should be familiar with the information in chapter 1 for proper understanding of chapters 2, 3, and 4.

b. The battery control console and target

radar control console are not covered fully in this manual because they are associated with more than the LOPAR acquisition radar system of the NIKE-HERCULES system. The portions of the battery control console and target radar control console associated with the LOPAR acquisition radar system are covered in this manual. The portions of the battery control console associated with the computer are covered in TM 9-1430-258-20 and the portions of the target radar control console associated with the tracking radar are covered in TM 9-1430-259-20.

2.1 (U). Forms, Records, and Reports

Refer to TM 38-750 for instructions on the use and completion of all forms required for operating and maintaining the equipment.

2.2 (U). Comments, Criticisms, and Corrections

a. Your ideas and comments on this manual are wanted. If you see errors or have suggestions to improve the way information is presented, write directly to Commanding General, U. S. Army Missile Command, Redstone Arsenal, Alabama, Attention: AMSMI-SMPT.



b. Comments may be in pencil and informal, but use DA Form 2028 if available. Replies will

be sent directly to the originator of comments.

## Sections II (U). DIAGRAMS

### 3 (U). General

Schematic diagrams are contained in this manual showing sufficient detailed information to permit the location of a faulty tube stage or chassis-mounted component.

### 4 (U). Description

a. Schematic diagrams graphically describe in detail the operation of an assembly or group of assemblies. All electronic circuit components are shown and are denoted by symbols which are described in table II. Apparatus lists, explained in paragraphs 10 and 11, and voltage and resistance charts, explained in paragraphs 6, 7, 8, and 9, are included with the diagrams.

b. References are given on schematic diagrams to facilitate signal tracing and component location.

c. On schematic diagrams of assemblies which are located on a larger assembly, reference by figure number in the notes column is given to the schematic diagram of the next larger assembly. The next larger assembly is then referenced to the appropriate assembly by placing the figure number and technical manual nomenclature of the assembly in the block depicting the smaller assembly. If connections from a schematic diagram are made directly to console terminals, a nomenclated block for the console is shown with the terminals to which the wiring connects.

d. Reference to the schematic diagrams of multiple-use assemblies is accomplished by the use of a note and a table. The table shows alternate figure references and mating connectors and, if applicable, the functional use and the different technical manuals of this series in which the assembly is used.

e. Reference to the functional diagram which shows signal circuits is accomplished by a note on the schematic diagram of console-mounted assemblies. Functional references are not given for consoles, trailers, and multiple-use chassis which appear on many illustrations.

f. Internal references within console schematic diagrams are used because of the size of

these illustrations. Physical and grid zone references are applied to each signal lead breakoff. For example, on figure 25, J17-8 located at zone C6 connects to J4-2 located at zone D12. The reference at J17-8 is (J4-2, 25D12) and the reference at J4-2 is (J17-8, 25C6). Voltage and ground breakoffs are not referenced but are shown in the voltage and ground distribution associated with the console schematic diagram.

g. Facing and continuing page illustrations are referenced by the use of keyed lines. Matching leads crossing the manual binding or continuing on a following page are keyed using subletters, i.e., a sub *b* on a lead breakoff matches to a sub *b* on the continuing lead.

h. Functional names which are stamped on the equipment appear on the schematic diagrams in condensed Gothic lettering, slightly larger in size than other functional name lettering appearing on the drawing.

### 5 (U). Explanation of Ground Symbols

a. The ground and alternating current neutral circuits for the NIKE-HERCULES, Improved NIKE-HERCULES, and NIKE-HERCULES ATBM Systems are related in the following manner. The trailer mounted director station and trailer mounted tracking station each contain a ground and a neutral bus, connected to each other by a strap wire and to earth ground by a ground wire and stake under the trailer. The trailer busses are connected to each other and to the other trailers in the system by cables. Each neutral bus in each trailer is connected to the various neutral leads within the trailer, and by cable to the engine generator. Each ground bus is connected to the various assemblies through wire paths, which serve as the common return circuit for all power supply and signal circuits having a grounded element.

b. The neutral symbol (table II) indicates the wire return for the alternating current power circuits. The neutral ground provides a low-resistance wire path to the engine generators and is at or near earth ground potential.

c. The circuit ground symbol (table II) indicates a return for direct current power supply circuits or for signal circuits. The circuit ground provides a low resistance path, direct or indirect, to the common ground bus and is at or near earth ground potential. The circuit ground path is frequently through connectors and may be broken when an assembly is removed from its mounting.

d. The frame ground symbols (table II) indicates a low-resistance path to the frame or chassis of an assembly, even though the path may be through a length of wire. This path continues to exist on the assembly even when the assembly is removed from its mounting and placed on an insulated surface. When the as-

sembly is in place, the frame ground is normally connected to an external circuit ground.

e. The relay ground symbol (table II) indicates the low-resistance wire return for the relay power supply. The return may be a separate path, or may be common with the circuit and frame ground.

f. All signal or regulator returns which are not at or near earth ground potential are shown as wire paths and designated as return circuits when it is necessary to distinguish them from other paths.

g. When a circuit ground forms one lead of a signal pair, it is identified by the same functional name as the signal lead. For example, a pair forming an azimuth feedback circuit is labeled AZ FB and AZ FB GND.

Table II (U). Schematic Symbols (sheet 1 of 8) (U).

	ADJUSTABLE; CONTINUOUSLY ADJUSTABLE; VARIABLE (ARROW SHAFT SHOWN AT 45 DEGREES ANGLE ACROSS BODY OF SYMBOL)		CAPACITOR, VARIABLE DIFFERENTIAL		CONNECTOR, J BLOCK
	ADJUSTMENT, KNOB		CAVITY, FIXED FREQUENCY WITH FEEDTHROUGH CAPACITOR		
	ADJUSTMENT, SCREWDRIVER		CIRCUIT BREAKER, SWITCH		
	AMPLIFIER, GENERAL (*INDICATES CIRCUIT FUNCTION)		CONNECTION, MECHANICAL		
	ANTENNA, GENERAL		CONNECTOR, CLIP, ALLIGATOR		CONNECTOR, POWER, NONPOLARIZED, MALE
	ARRESTOR, CARBON BLOCK		CONNECTOR, COAXIAL TO COAXIAL		CONNECTOR, POWER, NONPOLARIZED, FEMALE
	ATTENUATOR, FIXED GENERAL		CONNECTOR, COAXIAL TO COAXIAL GROUNDED		CONNECTOR, POWER, POLARIZED, MALE, TWO CONDUCTOR
	ATTENUATOR, VARIABLE GENERAL		CONNECTOR, COAXIAL TO SINGLE LEAD		CONNECTOR, POWER, POLARIZED, FEMALE, TWO CONDUCTOR
	BATTERY, MULTICELL		CONNECTOR, COMMUNICATION SWITCHBOARD		CONNECTOR, POWER, POLARIZED, MALE, THREE CONDUCTOR
	CAM (LOBE SHAPE MAY VARY ACCORDING TO APPLICATION)		CONNECTOR, FEEDTHROUGH		CONNECTOR, POWER, POLARIZED, FEMALE, THREE CONDUCTOR
	CAPACITOR, ADJUSTABLE OR VARIABLE				CONNECTOR, POWER, POLARIZED, MALE, FOUR CONDUCTOR
	CAPACITOR, FEEDTHROUGH				CONNECTOR, POWER, POLARIZED, FEMALE, FOUR CONDUCTOR
	CAPACITOR, FIXED GENERAL				
	CAPACITOR, VARIABLE, PHASE SHIFTER				

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




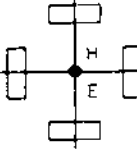







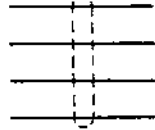





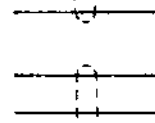


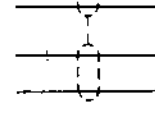

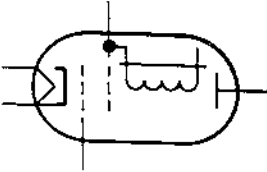
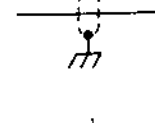

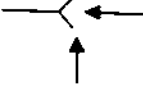

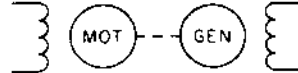
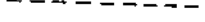





Table II (U). Continued (sheet 2 of 8).

	CONNECTOR, PIN AND JACK TYPE, SINGLE		COUPLING, WAVEGUIDE, LOOP		ENCLOSURE, GENERAL (FOR FUNCTIONAL GROUPING OF APPARATUS OR ASSEMBLY WITHOUT TM NOMENCLATURE)
	CONNECTOR, PIN AND JACK TYPE, MULTIPIN		COUPLING, WAVEGUIDE, PROBE		
	CONTACT, ELECTRICAL, FIXED		CRYSTAL, QUARTZ		
	CONTACT, ELECTRICAL, LOCKING		DETECTOR, WAVEGUIDE, CRYSTAL DIODE		
	CONTACT, ELECTRICAL, NON-LOCKING		DEVICE, AUDIBLE SIGNALING; AC OR DC, BELL		
	CONTACT, ELECTRICAL, MOMENTARY SWITCH		DEVICE, AUDIBLE SIGNALING; BUZZER		
	CONTACT, ELECTRICAL, SEGMENT; BRIDGING		DEVICE, AUDIBLE SIGNALING; SIREN		
	CONTACT, ELECTRICAL, SLIP RING AND BRUSH		DIRECTION, FLOW		ENCLOSURE, SHIELDED
	CONTACT, ELECTRICAL, SWITCHES; FOR LOCKING		DIRECTION, FLOW (SIGNAL)		FUSE
	CONTACT, PATCHING PANEL		ELEMENT, THERMAL; ACTUATING DEVICE		GROUND, BASIC (*INDICATES TYPE OF GROUND; DESIGNATES WIRE CONNECTION BETWEEN LIKE SYMBOLS)
	CONTACT, PATCHING PANEL (SHOWING TWO CONTACTS MADE)		ELEMENT, THERMAL; WITH BREAK CONTACT		GROUND, FRAME (PHYSICAL CONNECTION TO FRAME)
	COUPLER, WAVEGUIDE, DIRECTIONAL, GENERAL		ELEMENT, THERMAL; WITH MAKE CONTACT		INDUCTOR, WINDING; ADJUSTABLE
	COUPLING, WAVEGUIDE, APERTURE		ENCLOSURE, APPARATUS (ELECTRON TUBES OTHER THAN AMPLIFIERS)		INDUCTOR, WINDING, CENTER TAPPED
	COUPLING, WAVEGUIDE, BUILD-UP EXAMPLE				INDUCTOR, WINDING, AIR CORE

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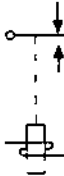
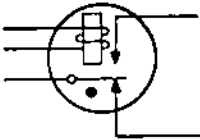
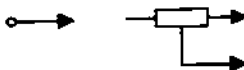
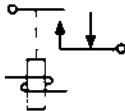
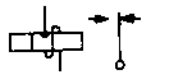
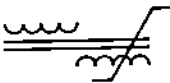
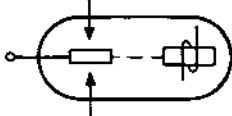
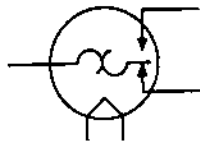






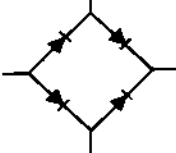
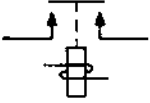


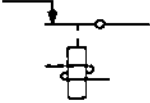

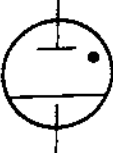
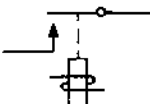

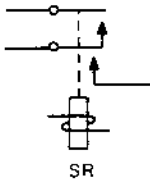
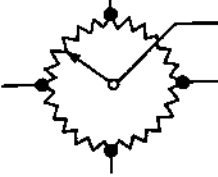
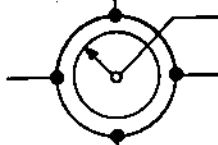
Table II (U). Continued (sheet 3 of 8).

	INDUCTOR, WINDING; MAGNETIC CORE		MECHANICAL, COMPONENTS, CLUTCH; NORMALLY CLOSED		PATH, BUS (INCOMPLETED)
	INDUCTOR, WINDING, VARIABLE		MECHANICAL, COMPONENTS, DRIVE (* INDICATES RATIO)		PATH, CABLE, COAXIAL
	JUNCTION, HYBRID (USED IN WAVEGUIDE TRANSMISSION)		MECHANICAL, COMPONENTS, HANDWHEEL		PATH, CABLE, ONE CONDUCTOR (* INDICATES CABLE RUN NO.)
	LAMP, FLUORESCENT		METER (* INDICATES FUNCTION) A AMMETER DB DECIBEL METER DBM DBM (DECIBELS REFERRED TO ONE MILLIWATT) METER G GALVANOMETER I INDICATING METER M INTEGRATING METER UA MICROAMMETER MA MILLIAMMETER V VOLTMETER W WATTMETER		PATH, CABLE, MULTI-CONDUCTOR (* INDICATES CABLE RUN NO.)
	LAMP, GLOW; INDICATING, AC		MOTION, MECHANICAL, ROTATION; ONE DIRECTION		PATH, CABLE SHIELDED; FOUR CONDUCTORS
	LAMP, GLOW, INDICATING, DC		MOTION, MECHANICAL, ROTATION; TWO DIRECTION		PATH, CABLE SHIELDED; FOUR CONDUCTORS SEPARATED
	LAMP, ILLUMINATING		MOTION, MECHANICAL, TRANSLATION; TWO POSITION		PATH, CABLES SHIELDED SEPARATELY WITH SHIELDS CONNECTED
	LAMP, INDICATING		MOTION, MECHANICAL, TRANSLATION; THREE POSITION		PATH, CABLE SHIELDED WITH SHIELD GROUNDED
	MACHINE, ROTATING, GENERATOR		OSCILLATOR, BACKWARD WAVE		PATH, CROSSING, NOT CONNECTED
	MACHINE, ROTATING, MOTOR		PATH, ALTERNATE OR CONDITIONAL; TWO ALTERNATE PATHS		PATH, JUNCTION OF CONNECTED PATHS
	MACHINE, ROTATING, MOTOR-GENERATOR		PATH, ASSOCIATED OR FUTURE		
	MAGNET, PERMANENT		PATH, BUS (COMPLETED)		
	MECHANICAL, COMPONENTS, CLUTCH; NORMALLY OPEN				

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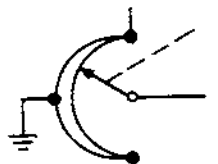

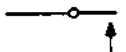
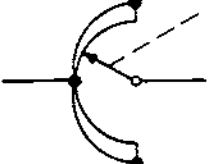

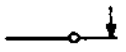
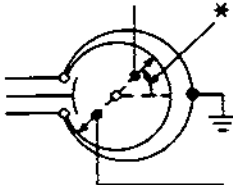
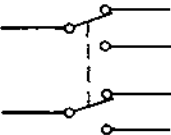
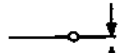
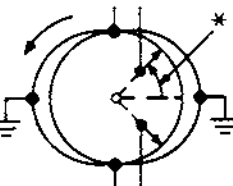
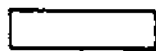
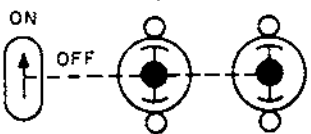
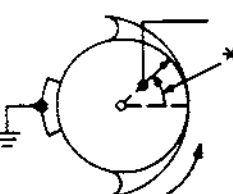
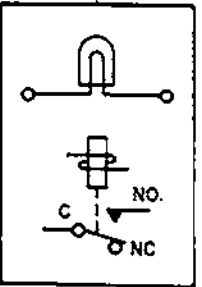

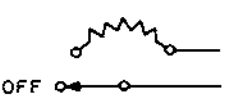



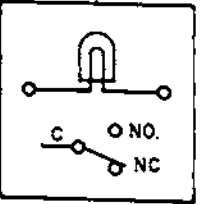
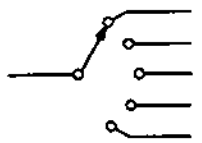

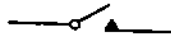
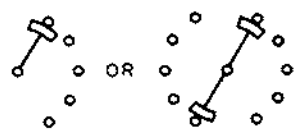

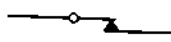
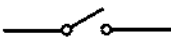
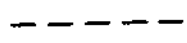
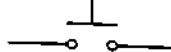
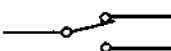

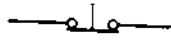
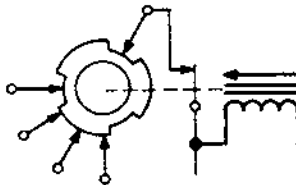
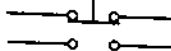
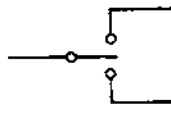
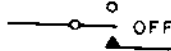
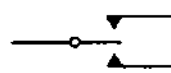


Table II (U). Continued (sheet 4 of 8).

	PATH, SINGLE WIRE CONDUCTOR		RELAY (BREAK BEFORE MAKE)		RELAY PLUG-IN TYPE; GAS FILLED
	PROBE, TEST (SYMBOL AT LEFT FOR GENERAL AC OR DC APPLICATION, OR OTHER TEST CONNECTION; SYMBOL AT RIGHT FOR AC APPLICATION ONLY)		RELAY (MAKE BEFORE BREAK)		RELAY, POLARIZED; WITH TRANSFER CONTACT
	REACTOR, SATURABLE		RELAY, CHOPPER		RELAY THERMAL; WITH INTEGRAL HEATER AND TRANSFER CONTACTS
	RECTIFIER, CRYSTAL DIODE; BREAKDOWN TYPE (ZENER DIODE OR EQUIVALENT)		RELAY, COIL		RESISTOR, ADJUSTABLE OR VARIABLE
	RECTIFIER, CRYSTAL DIODE; GENERAL TYPE (ARROWHEAD DENOTES ANODE)		RELAY, COIL; WITH INNER END OF WINDING INDICATED		RESISTOR, FIXED
	RECTIFIER, FULL WAVE, BRIDGE TYPE (SINGLE UNIT)		RELAY, SINGLE THROW, DOUBLE MAKE		RESISTOR, TAPPED
	RECTIFIER, FULL WAVE, BRIDGE TYPE (COMPOSED OF FOUR SINGLE UNITS)		RELAY, NORMALLY CLOSED (BREAK)		RESISTOR, THERMAL (THERMISTOR) GENERAL
	RECTIFIER, POOL-TYPE CATHODE POWER		RELAY, NORMALLY OPEN (MAKE)		RESISTOR, THERMAL (THERMISTOR) WITH INDEPENDENT INTEGRAL HEATER
			RELAY, NORMALLY OPEN (MAKE BEFORE MAKE) SR DENOTES SLOW- RELEASE TYPE		RESISTOR, VARIABLE POSITION DATA
					UNIT SCHEMATIC

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Table II (U). Continued (sheet 5 of 8).

	RESISTOR, VARIABLE, SINE		SPARK GAP		SWITCH, NON-LOCKING; CIRCUIT CLOSING (MAKE)
	RESISTOR, VARIABLE, COSINE		SPARK GAP, GAS FILLED		SWITCH, NON-LOCKING; CIRCUIT OPENING (BREAK)
	RESISTOR, VARIABLE, SINE OR COSINE, TWO QUADRANT SWITCHING		SWITCH, DPDT		SWITCH, NON-LOCKING (TRANSFER)
	RESISTOR, VARIABLE, SINE OR COSINE, FOUR QUADRANT SWITCHING (* INDICATES FUNCTION OF THE ANGLE)		PUSHBUTTON TITLE BLOCK (MECHANICALLY LINKED TO SWITCH CONTACTS) (NOTE 2)		SWITCH, ROTARY SNAP
	RESISTOR, VARIABLE, SPECIAL SHAPED (* INDICATES FUNCTION OF THE ANGLE)		SWITCH-INDICATOR; WITH HOLDING COIL AND INDICATOR LAMP, MOMENTARY CONTACT (NOTE 1)		SWITCH, SAFETY INTERLOCK (CIRCUIT CLOSING)
	RESISTOR, VARIABLE, WIRE WOUND WITH OFF POSITION		PUSHBUTTON TITLE BLOCK (MECHANICALLY LINKED TO SWITCH CONTACTS) (NOTE 2)		SWITCH, SAFETY INTERLOCK (CIRCUIT OPENING)
	RESONATOR, BUILD-UP EXAMPLE		SWITCH-INDICATOR; WITH INDICATOR LAMP, OPEN OR CLOSED TYPE OR MOMENTARY CONTACT AS CIRCUIT DEMANDS (NOTE 1)		SWITCH, SELECTOR, GENERAL
	RESONATOR, CAVITY		SWITCH, MOMENTARY; CIRCUIT CLOSING (MAKE)		SWITCH, SELECTOR, SHORTING; BRIDGING
	RESONATOR, VARIABLE		SWITCH, MOMENTARY; CIRCUIT OPENING (BREAK)		SWITCH, SINGLE-POLE SINGLE-THROW (OR SHORTING BAR)
	SHIELDING		SWITCH, MOMENTARY PUSH- BUTTON; CIRCUIT CLOSING (MAKE)		SWITCH, SINGLE-POLE DOUBLE-THROW
	SOLENOID		SWITCH, MOMENTARY PUSH- BUTTON; CIRCUIT OPENING (BREAK)		SWITCH, STEP
			SWITCH, MOMENTARY PUSHBUTTON; SPRING RETURN (TWO CIRCUIT)		SWITCH, TOGGLE, THREE POSITION
			SWITCH, MOMENTARY, THREE POSITION CIRCUIT CLOSING (MAKE)		SWITCH, TOGGLE, THREE POSITION; MOMENTARY CONTACT (SPRING RETURN TO CENTER POSITION)

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Table II (U). Continued (sheet 6 of 8).

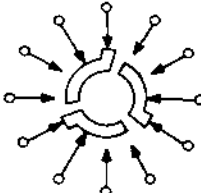

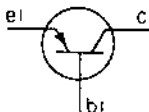
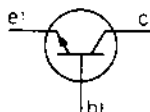
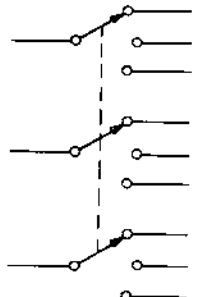

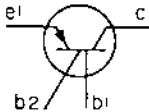
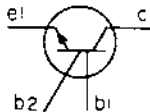
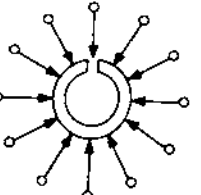

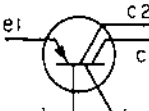
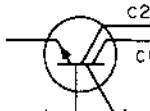
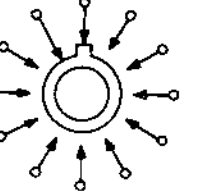


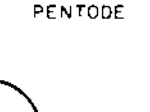




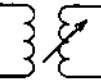
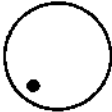
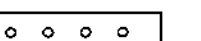
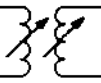



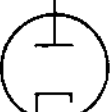


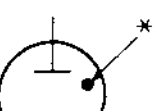




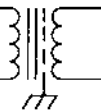

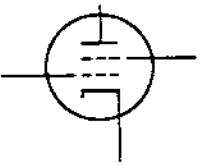
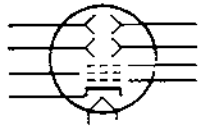
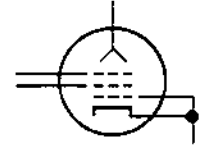
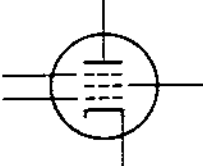
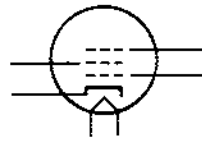
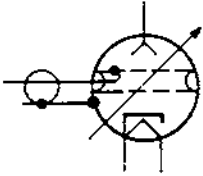
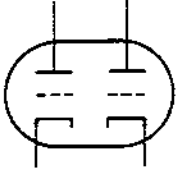
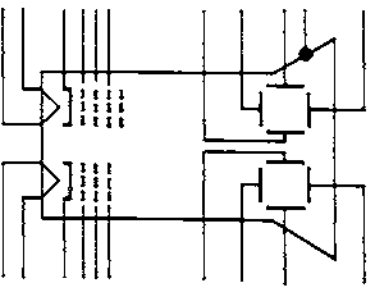
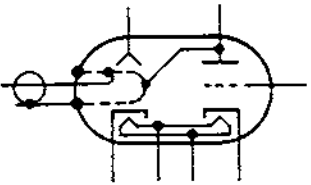
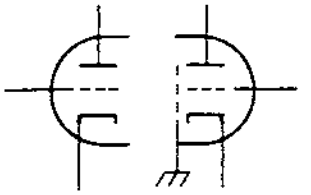
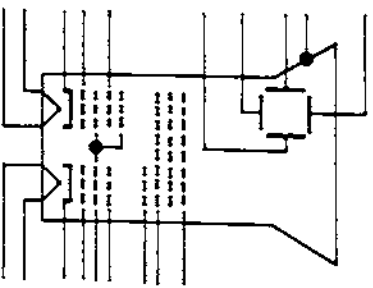
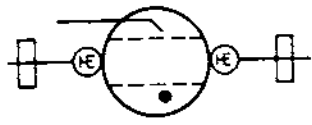
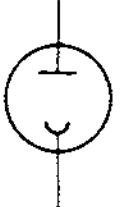
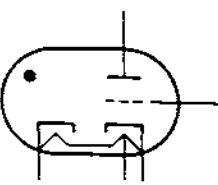
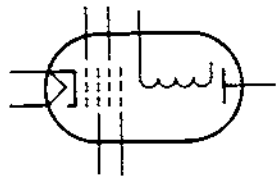
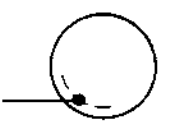
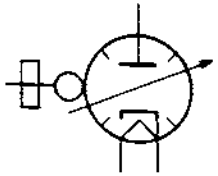
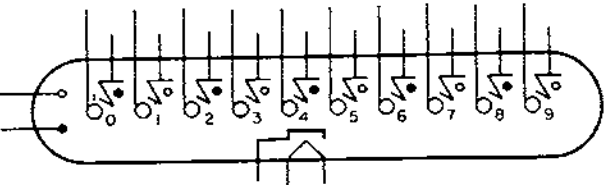
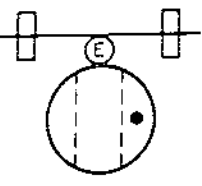
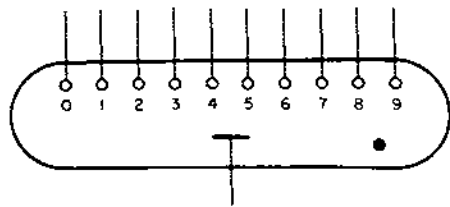
	SWITCH, WAFER, THREE-POLE THREE-CIRCUIT; WITH TWO NON-SHORTING AND ONE SHORTING MOVABLE CONTACTS (VIEWED FROM KNOB OR SHAFT END)		TEST POINT		TRIODE; N OR PNP TYPE		TRIODE; P, NPN OR NPNP TYPE	TRANSISTOR, ELECTRO-ELECTRICAL TRANSDUCER. ARROWHEAD DENOTES EMITTER AND DIRECTION OF ARROWHEAD DENOTES TYPE (LETTERS SHOWN ARE NOT PART OF THE SYMBOL BUT MAY BE USED FOR CLARITY)
	SWITCH, WAFER (EQUIVALENT OF ABOVE SYMBOL)		THERMOCOUPLE, TEMPERATURE MEASURING		TRANSDUCER, MODE (GENERAL)		TRANSDUCER, MODE (BUILD-UP)	
	SWITCH, WAFER, SINGLE NOTCH (VIEWED FROM KNOB OR SHAFT END)		TRANSFORMER, BLOCKING OSCILLATOR OR BIFILAR WOUND		TETRODE		TETRODE	
	SWITCH, WAFER, SINGLE POLE, SINGLE CIRCUIT; WITH ONE NON-SHORTING AND ONE SHORTING MOVABLE CONTACT (VIEWED FROM KNOB OR SHAFT END)		TRANSFORMER, BLOCKING OSCILLATOR OR BIFILAR WOUND		PENTODE		PENTODE	
	SYNCHRO, DIFFERENTIAL TRANSMITTER OR RECEIVER		TRANSFORMER; GENERAL		TUBE, ELECTRON, ENVELOPE; GENERAL			
	SYNCHRO, TRANSMITTER, RECEIVER, OR CONTROL TRANSFORMER		TRANSFORMER; SINGLE TUNED		TUBE, ELECTRON, ENVELOPE; GAS FILLED			
	TERMINAL, BOARD		TRANSFORMER; DOUBLE TUNED		TUBE, ELECTRON, ENVELOPE; SPLIT ENVELOPE			
	TERMINAL (WITH NUMBER SHOWN)		TRANSFORMER; MAGNETIC CORE (USED ONLY WHEN NECESSARY TO INDICATE POLARITY)		TUBE, ELECTRON, DIODE (HEATER MAY BE SHOWN SEPARATELY)			
	TERMINATION; OPEN CIRCUIT		TRANSFORMER; MULTIPLE SECONDARY WINDINGS		TUBE, ELECTRON, DIODE, COLD CATHODE (* INDICATES GAS FILLED)			
	TERMINATION; RESISTOR (WAVEGUIDE)		TRANSFORMER; TAPPED WINDING		TUBE, ELECTRON, TRIODE			
	TERMINATION; SHORT CIRCUIT		TRANSFORMER; SHIELDED TO GROUND					
			TRANSFORMER; VARIABLE					

Table II (U). Continued (sheet 7 of 8).






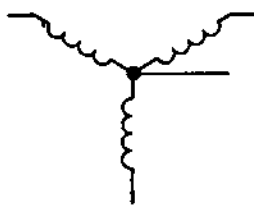
	TUBE, ELECTRON, TETRODE		TUBE, ELECTRON, CATHODE RAY, WITH ELECTROSTATIC DEFLECTION		TUBE, ELECTRON REFLEX KLYSTRON
	TUBE, ELECTRON, PENTODE		TUBE, ELECTRON, CATHODE RAY, WITH MAGNETIC DEFLECTION		TUBE, ELECTRON REFLEX KLYSTRON MECHANICALLY TUNED
	TUBE, ELECTRON, TWIN TRIODE; WITH ELONGATED ENVELOPE		TUBE, ELECTRON, CATHODE RAY, DUAL TRACE, WITH ELECTROSTATIC DEFLECTION		TUBE, ELECTRON REFLEX KLYSTRON THERMALLY TUNED
	TUBE, ELECTRON, TWIN TRIODE; SPLIT ENVELOPE (WITH INTERNAL SHIELD)		TUBE, ELECTRON, CATHODE RAY, CONTROLLED PERSISTENCE INDICATOR, WITH ELECTROSTATIC DEFLECTION		TUBE, ELECTRON, TRANSMIT-RECEIVE
	TUBE, ELECTRON, PHOTOTUBE, SINGLE UNIT VACUUM TYPE		TUBE, ELECTRON, HYDROGEN THYRATRON CAPSULE HEATER TYPE		TUBE, ELECTRON, TRAVELING WAVE
	TUBE, ELECTRON, SHIELDED		TUBE, ELECTRON, MAGNETRON, VARIABLE		TUBE, ELECTRON, BEAM SWITCHING
	TUBE, ELECTRON, ANTI- TRANSMIT-RECEIVE				TUBE, ELECTRON, DIGITAL READOUT (NIXIE)

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Table II (U). Continued (sheet 8 of 8).

	VARISTOR; ASYMMETRICAL
	VARISTOR; SYMMETRICAL
	WAVEGUIDE; CIRCULAR
	WAVEGUIDE; RECTANGULAR
	WINDING, DELTA (GENERATOR, MOTOR OR TRANSFORMER)
	WINDING, Y (GENERATOR, MOTOR OR TRANSFORMER)

- NOTES:
1. A MAXIMUM OF 4 SETS OF SWITCH CONTACTS ARE USED WITHIN THE SWITCH-INDICATOR. THESE ARE NUMBERED SCHEMATICALLY S1A, S1B, S1C AND S1D. SOME SWITCH-INDICATORS ARE STAMPED SW1, SW2, SW3 AND SW4, CORRESPONDING TO S1A, S1B, S1C AND S1D.
  2. TITLE BLOCK MAY BE DIVIDED TO INDICATE DUAL FUNCTION

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## Section III (U). VOLTAGE AND RESISTANCE CHARTS

## 6 (U). General

Voltage and resistance charts are provided as an aid to organizational maintenance personnel in locating faulty assemblies and isolating the trouble to a stage. Voltage and resistance charts are supplied for the schematic diagrams which have electron tube stages and are associated with the figure number of the illustration to which they apply. The readings may be considered typical but may vary among systems. The voltage readings may differ from those listed when battery type 4 test equipment is used in testing the assembly.

## 7 (U). Description

a. Information pertinent to making measurements is contained in measurement notes on each voltage and resistance chart. A view of the underside of the chassis identifies and locates the tube sockets and connectors. Tube sockets and connectors appearing in broken lines indicate that the socket or connector is on the opposite side of the chassis.

b. The voltage and resistance chart is divided into columns indicating socket and tube reference designation, tube type, tube functions, and tube elements: plate, suppressor, screen, control, cathode, and filament. Each element column is sub-divided into three columns indicating the pin number, the voltage normally present on the respective pins, and the resistance normally read. A designation "1, 7" appearing in the pin column indicates that pins 1 and 7 are connected and that the meter reading may be taken between either pin 1 or pin 7 and ground. A designation "4 to 5" appearing in the pin column indicates that the meter reading is to be taken between pins 4 and 5. When no information appears in an element column, that element is not contained or is not used in the tube.

## 8 (U). Socket Voltage Measurements

a. Socket voltage measurements are made with all variable resistors adjusted for normal operation and all tubes in their sockets.

b. Unless otherwise noted, measurements are made with multimeter TS-505/U. For voltages beyond the range of multimeter TS-505/U, multimeter TS-352/U is used. All readings are

made using the scale that permits reading nearest full scale.

c. Whenever possible, measurements are made with all power and grounds applied and all signals removed. Signals that are not removed are indicated in the measurement notes. For identical chassis used in several places, such as dc amplifiers, measurements are made with all signals removed and only supply voltages applied.

d. All voltages are +direct current measured to ground unless otherwise noted. A dash (—) in the volts column indicates a voltage of no significance.

e. The organizational maintenance technician will be unable to make certain voltage measurements because of limitations of the organization test equipment. Those voltages which the organizational maintenance technician cannot measure are indicated in the measurement notes.

f. A voltage and resistance chart is not given for the acquisition modulator because of limitations of test equipment.

g. Maintenance personnel should observe with extreme care all cautions and warnings contained in the measurement notes.

## 9 (U). Socket Resistance Measurements

a. Socket resistance measurements are made with all variable resistors adjusted for normal operation and all tubes in their sockets.

b. Unless otherwise noted, measurements are made with multimeter TS-352/U, using the scale that permits a reading nearest midscale.

c. Measurements are made with all external connectors disconnected and all direct current voltage inputs strapped to frame ground as illustrated by the pin strapping arrangement on the chart.

d. All resistance values are in ohms and are measured to ground unless otherwise noted. A dash in the ohms column indicates a resistance in excess of 10 megohms. When electron tube filaments are connected so that the equivalent filament resistance is less than 1 ohm, the reading is indicated as less than 1 ohm (<1). When electron tube filaments are connected so that the resistance is more than 1 ohm, the actual value is given.

## Section IV (U). APPARATUS LISTS

## 10 (U). General

Apparatus lists are provided for schematic diagrams to identify electronic components and to facilitate selection of proper replacement parts.

## 11 (U). Description

Apparatus lists associated with the schematic diagrams provide reference designation and identifying part number. When a schematic diagram illustrates a large chassis with smaller subchassis, the apparatus list for the larger chassis does not include the apparatus list for the smaller subchassis. The subchassis has a separate apparatus list with its associated schematic diagram. Exceptions to this occur when the subchassis is shown in its entirety on the larger schematic diagram. In order to distinguish these parts from components of the larger chassis, the part description is indented. Apparatus designations used in the schematic diagrams are given in table III.

Table III (U). Apparatus Designations (U)

Designation	Apparatus
A	Switch-indicator
AT	Attenuator
ATR	Anti-transmit-receive electron tube
B	Motor; blower; fan; generator; resolver; servo motor; synchro
BT	Battery
C	Capacitor
CB	Circuit breaker
CP	Coupling; feedthrough connector
CR	Crystal diode; metallic rectifier; asymmetrical variator
DC	Directional coupler
DL	Delay line

Table III (U). Apparatus Designations—Continued (U)

Designation	Apparatus
DS	Alarm; bell; buzzer; lamp (illuminating and indicating)
E	Arrestor; resonator; terminal stud
EA	Phase A bus
EB	Phase B bus
EC	Phase C bus
EG	Ground bus
EN	Neutral bus
F	Fuse
FL	Filter
G	Generator
HR	Heating resistor
HY	Hybrid junction
I	Indicator; lamp (illuminating and indicating)
J <sup>1</sup>	Connector; plug or receptacle; convenience outlet (electrical)
K	Relay; solenoid
L	Coil; inductor; solenoid
M	Meter
MG	Motor-generator
MT	Mode transducer
P <sup>2</sup>	Connector; plug (electrical)
PS	Power supply
Q	Transistor
R	Resistor
RT	Thermal resistor (thermistor)
RV	Symmetrical varistor
S	Switch; thermal element
T	Transformer
TB	Terminal board; terminal strip
TC	Thermocouple
TP	Test point
TR	Transmit-receive electron tube
TY	Protector block
V	Electron tube
VR	Reactor regulator; voltage regulator
XV	Tube socket
Z	Network; delay line; tuned inductor

<sup>1</sup> Generally chassis mounted.

<sup>2</sup> Generally cable mounted.

## Section V (U). WAVEFORMS, ABBREVIATIONS, AND RELAY TYPES

## 12 (U). Waveforms

Waveforms are shown on the unit schematic diagram at signal inputs and outputs built-in test points, and wherever a significant change of waveform occurs. When significant, characteristics such as amplitude, pulse width, and frequency are shown with the waveforms. Waveform amplitudes are for a typical system,

and may or may not agree with the theoretical waveform amplitudes stated in theory TM 9-1430-250-20/1.

## 13 (U). Abbreviations

Abbreviations are used in the diagrams and charts to avoid crowding and repetition of long words or phrases. The abbreviations are given in table IV.



14 (U.) Relay Types

Table V provides information on each type of relay used in the NIKE-HERCULES system.

Table IV (U). Abbreviations (U)	
Abbreviations	Nomenclature
&	And
A	Ajax (panel stamped)
AAR	Auxiliary acquisition radar
AB	Abandon
AC	Alternating current
ACQ	Acquisition
ACKNOW	Acknowledge
ADP	All data present (pulse)
ADJ	Adjust
AFC	Automatic frequency control
A <sub>g</sub>	Gyro azimuth
AGC	Automatic gain control
AJD	Anti-jam display
ALM	Alarm
AM	Ammeter; amplitude (an elliptical function)
AMB	Amber
AMP	Ampere(s)
AMPL	Amplifier
ANT.	Antenna
ASSY	Assembly
AT.	Ampere-turn
ATBM	Anti-tactical ballistic missile
ATC	Automatic tracking control
ATTEN	Attenuation; attenuator
AUTO	Automatic
AUX	Auxiliary
AVE	Automatic volume expansion
AZ	Azimuth
B	Hercules
BAL	Balance
BARB.	Barbette
BAT.	Battery (electrical); battle
BC	Battery control
BE.	Burst enable
BEL	Burst enable locking
BFO	Beat-frequency oscillator
BK	Brake
BL	Burst locking
BLK	Black; blanking
BLO	Blower
BLU	Blue
BO	Blackout; blocking oscillator; burst order
BRN	Brown
BTRY	Battery
BUZ	Buzzer
BWO	Backward wave oscillator
C	Cathode
CAL	Calibrate
CARR	Carrier (panel stamped)
CAV	Cavity
CCW	Counterclockwise

Table IV (U). Abbreviations—Continued (U)	
Abbreviations	Nomenclature
CF	Cathode follower
CHG	Change; charge
CKT	Circuit
CLR	Clear
CLU	Cluster
CMND	Command
CMPTR	Computer
COAX.	Coaxial
COINC	Coincidence
COLL	Collector (COL if panel stamped)
COM	Common
CONF	Confirm
CONT	Control
CONV	Convenience
COR	Correction
COV	Cover
CPS	Cycles per second
CR	Cathode ray
CRT	Cathode ray tube
CT	Center tap; control transformer synchro
CTR	Center
CUR.	Current
CW	Clockwise; continuous wave
CX	Control transmitter synchro
CY	Cycle
DB	Decibel(s)
DC	Direct current
DECR	Decrease
DEM	Demodulator
DES	Designate
DET	Detector
DIO	Diode
DIFF	Differential
DISCH	Discharge
DISCR	Discriminator
DISPL	Displacement
DISTR	Distribution
DL	Delay line
DN	Down (panel stamped)
DR	Drive
E	East
EL	Elevation
EQUIP.	Equipment
ESC	Escape
EXC	Excitation
EXT	Extension; external
F	Farad
FB	Feedback
FIG.	Figure
FIGS.	Figures
FIL	Filament(s); filter
FLUOR	Fluorescent
FOL	Follower
FR	Frame; front
FREQ	Frequency
FRM	Frequency meter
FS	Fail safe; full scale

Table IV (U). Abbreviations—Continued (U)	
Abbreviations	Nomenclature
FUIF	Fire unit integration facility
FWD	Forward
G	Grid
GALV	Galvanometer
GEN	Generator
GFE	Government furnished equipment
GR	Group
GRD	Ground
GRN	Green
GTC	Gain time control
GY	Gray
GYRO	Gyroscope
H	Henry (electrical); high
HDL	Handle
HD WHL	Hand wheel
HE.	High explosive
HEL	Helix
HF	High frequency
HIPAR	High power acquisition radar
HORIZ	Horizontal
HP	High power
HPLD	HIPAR lights dimmed
HTR	Heater
HV	High voltage
I	Ajax
IF	Intermediate frequency
IFF	Identification friend or foe
ILLUM	Illuminate
IN.	Input
INCR	Increase
IND	Indicate; indicator
INT	Internal
INTER	Interference
INTLK	Interlock
INV	Inverter
IS.	Interference suppressor
J	Jack
JS	Jam strobe
K	Kilohm(s)
KC	Kilocycle(s)
KV	Kilovolt(s)
L	Inductance coil; left; low
LA	Low altitude
LCH	Launch
LCHR	Launcher
LD	Lights dimmed
LG	Length; long
LIM	Limit
LO.	Local oscillator
LOPAR	Low power acquisition radar
LPLD	LOPAR lights dimmed
LPSA	Low power servo amplifier
LR	Long range
LV	Low voltage
LWR	Lower
LX	East-west line resolver signal
M	Milli (10 <sup>-3</sup> )

Table IV (U). Abbreviations—Continued (U)	
Abbreviations	Nomenclature
MA	Milliampere(s); missile away
MAG	Magnetron
MAL	Missile away locking
MAN.	Manual
MBA	Minimum burst altitude
MC	Megacycle(s)
MEAS	Measure
MGC	Manual gain control
MK	Mark
MOD	Modulator
MOT	Motor
MS	Millisecond(s)
MSL	Missile
MTI	Moving target indicator
MTR	Missile tracking radar
MV	Millivolt(s)
MVB	Multivibrator
N	North
N-A	Nike-Ajax (N-I if panel stamped)
NC	No connection; normally closed
NEG	Negative
NET.	Network
NEUT	Neutral
N-H	Nike-Hercules (N-B if panel stamped)
NO.	Normally open
NORM.	Normal (NOR. if panel stamped)
OPR	Operate
OSC	Oscillator
OUTP	Output
OUT.	Outlet
OV	Over
OVL	Overload
OVRD	Override
P	Pitch
PAN.	Panoramic
PED	Pedestal
PERS	Personnel
PH	Phase
PHOS	Phosphor
PI	Personal identification
PKP	Preknock pulse
PLX	Parallax
PNL	Panel
POS	Positive
PPI	Plan position indicator (azimuth and range)
PPS	Pulses per second
PREAMP	Preamplifier
PRE-ATTEN	Pre-attenuator
PREP	Prepare
PRESS.	Pressure
PRF	Pulse repetition frequency
PRIM.	Primary
PROC	Processor
PRR	Pulse-repetition frequency
PSI	Pounds per square inch

Table IV (U). Abbreviations—Continued (U)

Abbreviations	Nomenclature
PU	Pick-up
PWR	Power
R	Right
R1, R2, R3	Rotor leads 1, 2, 3
RC	Resistance-capacitance
RCDC	Radar course directing central
RCVR	Receiver
RDR	Radar
RDY	Ready
REC	Recorder
RECP	Receptacle
RECT	Rectifier
RED	Red
REF	Reference
REG	Regulator
REL	Relay; release
REM	Remote
REP.	Repetition
RES.	Resistance; resistor; reservoir
RF	Radio frequency
RG	Range
RM	Range marks
RMTE	Remote
RPM	Revolutions per minute

Table IV (U). Abbreviations—Continued (U)

Abbreviations	Nomenclature
RPS	Revolutions per second
RSVR	Resolver
S	South
S1, S2, S3	Stator leads 1, 2, 3
SA	Surface-to-air
SD	Signal dimmed
SEC	Second
SECT.	Section
SEL	Select; selector
SENS	Sensitivity
SH	Sheet
SHLD	Shield
SIF	Selective identification feature
SIG	Signal
SIN.	Sine
SL	Slew
SOL.	Solenoid
SQ	Square
SR	Slow release; short range
SS	Surface-to-surface
STBY	Standby
STC	Sensitivity time control
SUPPR	Suppressor
SVO	Servo

Table IV (U). Abbreviations—Continued (U)

Abbreviations	Nomenclature
SW	Short wave
SWP	Sweep
SYM	Symbol
SYNC	Synchronizer; synchronizing
SYS	System
TAC	Tactical
TACH	Tachometer (for generator)
TCK	Track
TECH	Technical
TEL	Telescope
TEMP	Temperature
TGT	Target
THYR	Thyratron (THY if panel stamped)
TM	Technical manual
TMTR	Thermistor
TRANS	Transfer
TR	Transmit-receive
TRK	Track
TRR	Target ranging radar
TTR	Target tracking radar
U	Micro ( $10^{-6}$ )
U <sub>A</sub>	Microampere(s) (peak)
UA	Microampere(s)
UF	Microfard(s)

Table IV (U). Abbreviations—Continued (U)

Abbreviations	Nomenclature
UH	Microhenry(ies)
UNGR	Unground
USEC	Microsecond(s)
UUF	Micromicrofarad(s)
UUH	Micromicrohenry(ies)
UV	Microvolt(s)
V	Velocity; volt
VAR	Variable
VENT.	Ventilate
VERT.	Vertical
VFO	Variable frequency oscillator
VID	Video
VOL	Volume
W	Watt(s); west; wide; width
WHL	Wheel
WHT	White
XL	Large prime warhead
XFMR	Transformer
XMTR	Transmitter
XS	Small prime warhead
XTAL	Crystal
XW	Prime warhead
Y	Yaw
YEL	Yellow



Table V (U). Relay types, sheet 1 of 3.

TABLE V RELAY TYPES

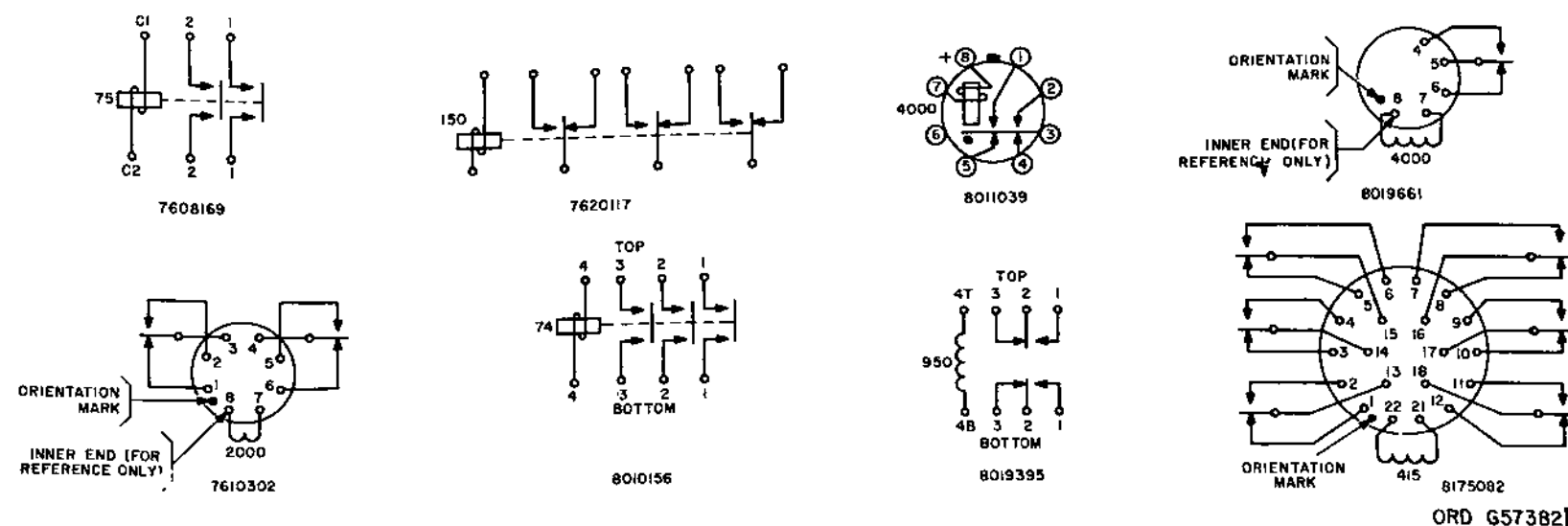
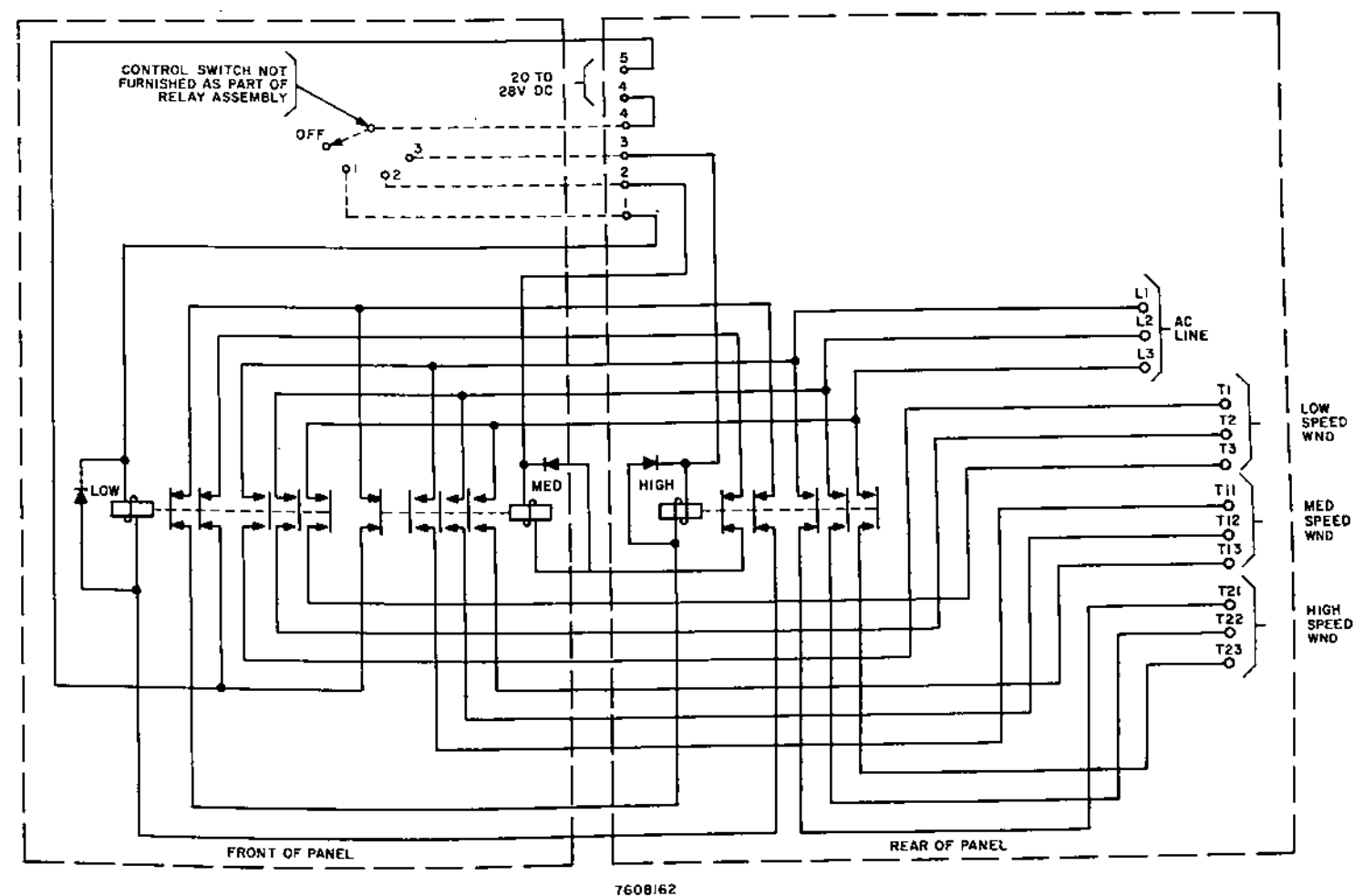
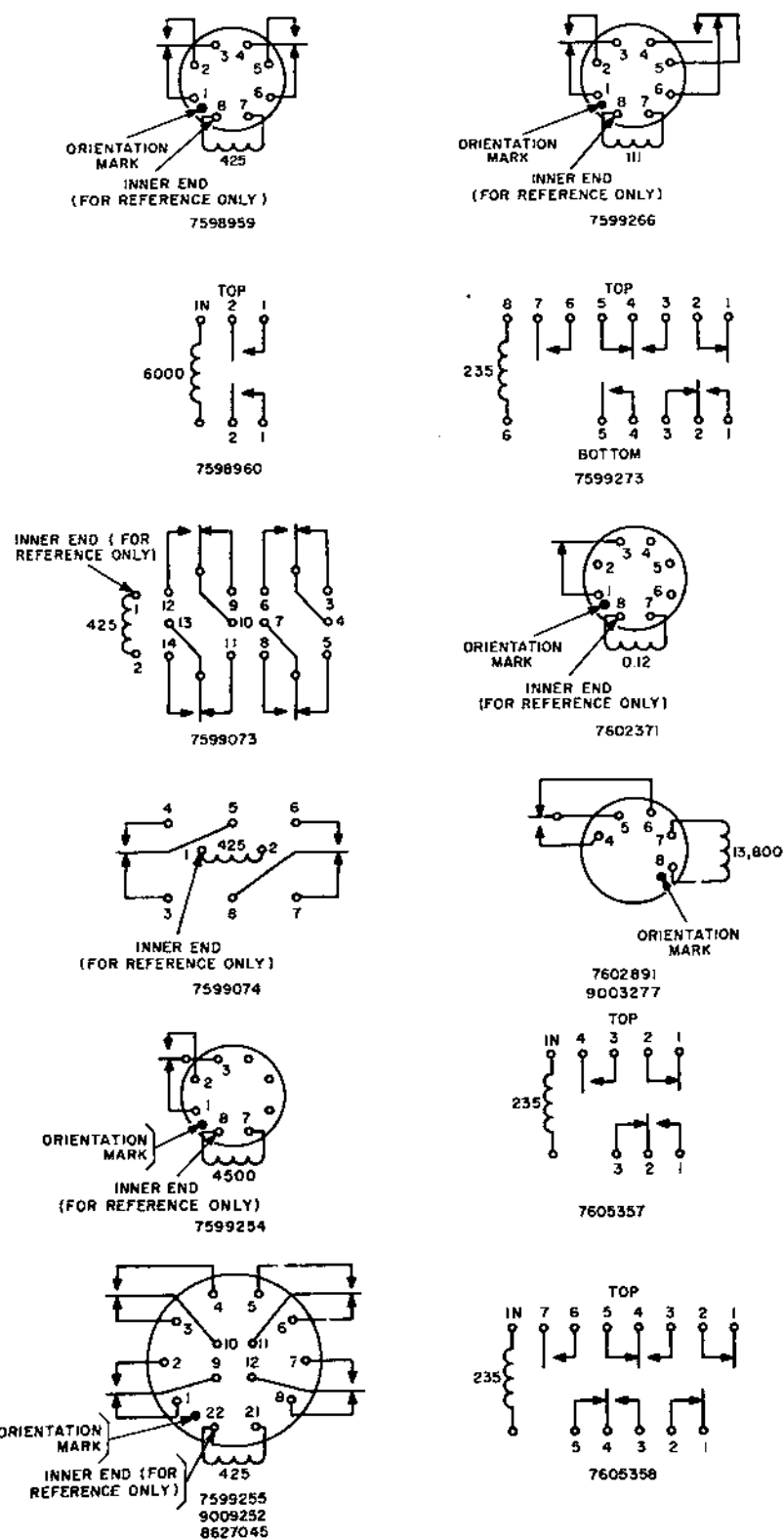
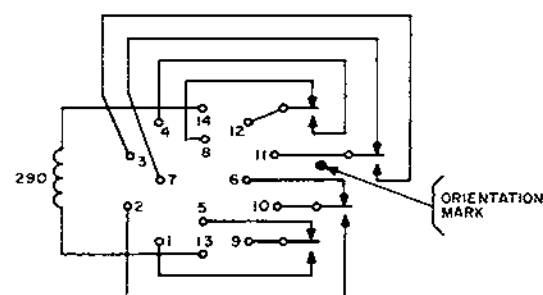
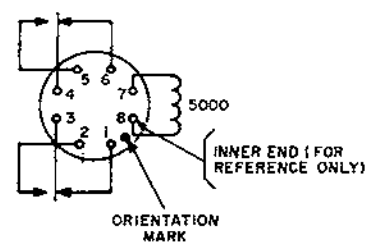


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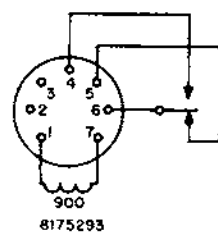
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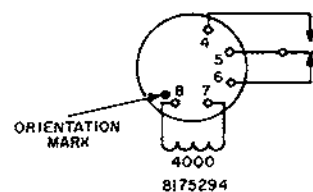
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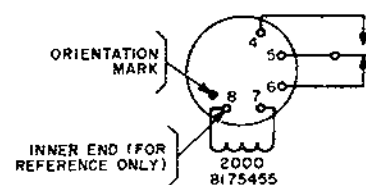
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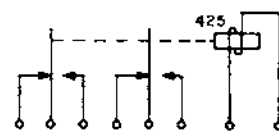
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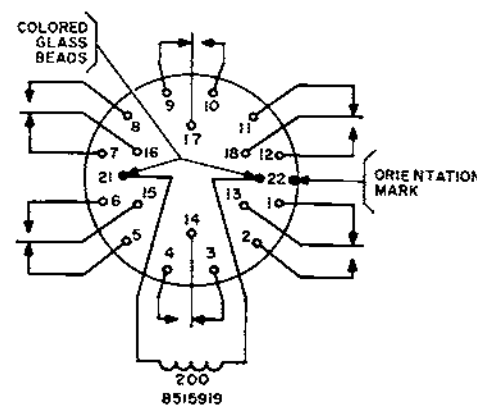
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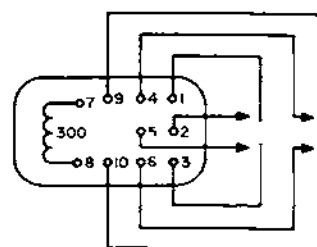
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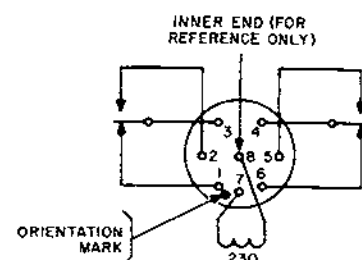
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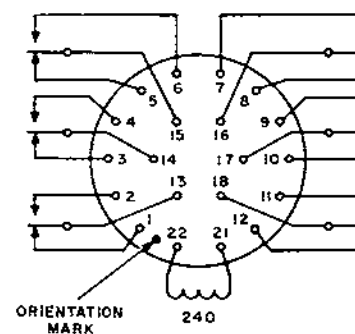
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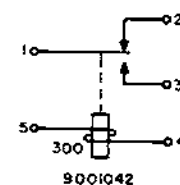
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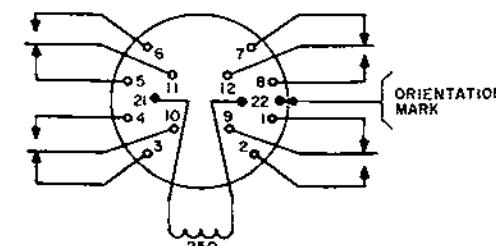
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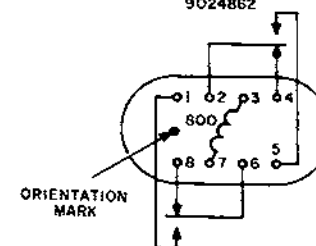
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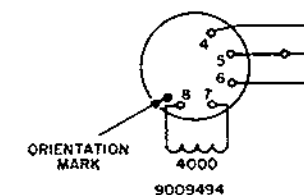
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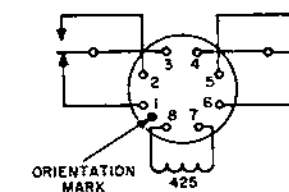
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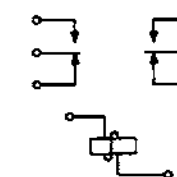
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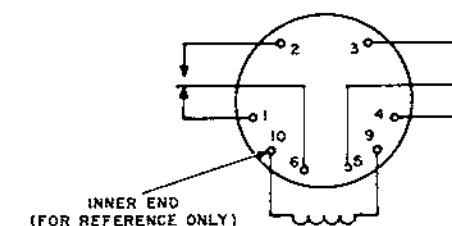
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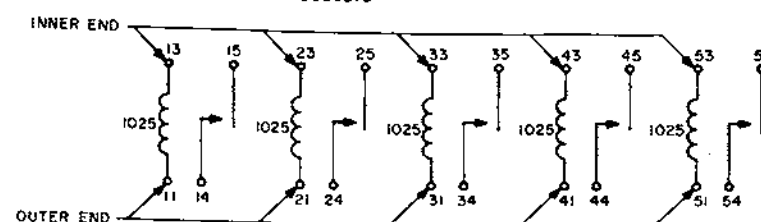
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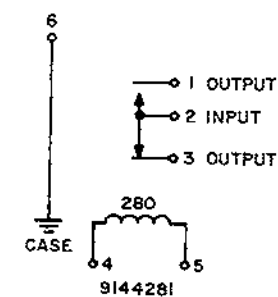
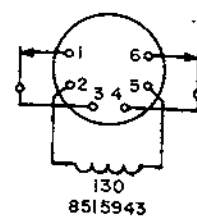
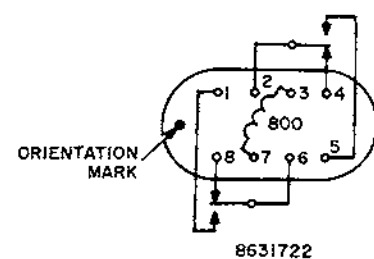
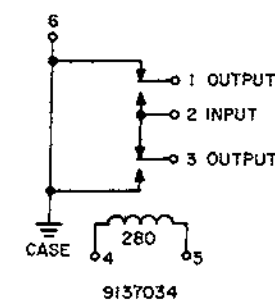
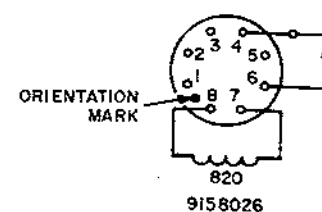
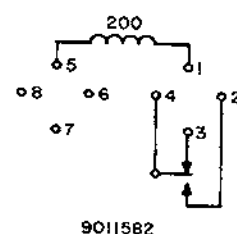
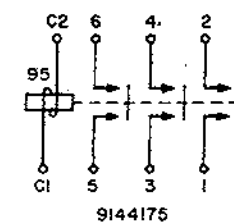
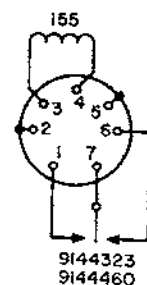
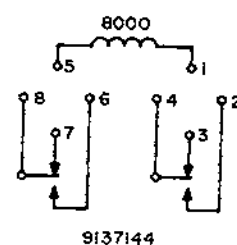
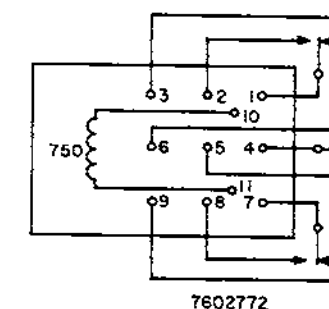
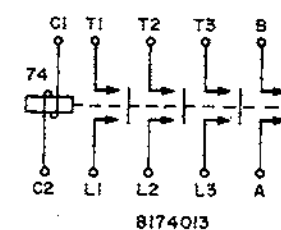
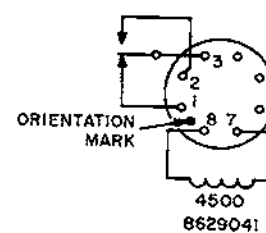
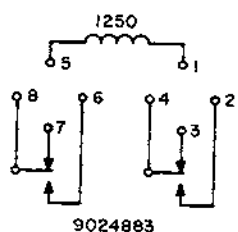
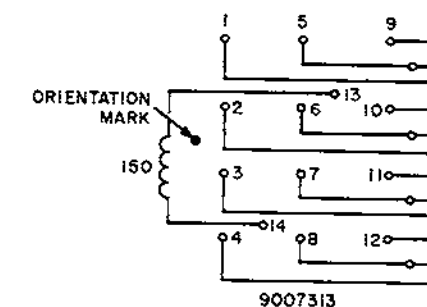
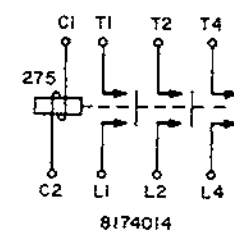
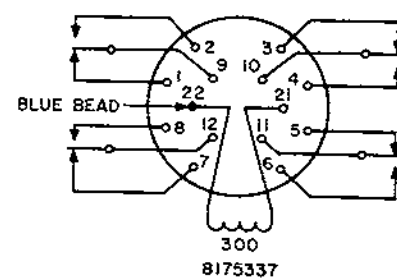
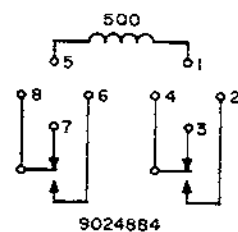


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ORD G57383



Table V (U). Continued, sheet 3 of 3.



## Section VI (U). SCHEMATIC EFFECTIVITY

## 15 (U). General

Table VI provides information for unit schematics that are common to the NIKE-HERCULES or Improved NIKE-HERCULES and/or NIKE-HERCULES ATBM Systems.

Table VI (U). Schematic Effectivity (U)

Fig. no.	NIKE-HERCULES	Improved NIKE-HERCULES	ATBM
2	X		
2.1	X		
2.2	X		
2.3	X		
3	X		
3.1	X		
3.2	X		
3.3	X		
4	X		
5	X	X	
6	X		
7	X		
8	X		
8.1	X		
9	X		
10	X		
10.1	X		
11	X		
12	X	X	
13	X	X	X
14	X	X	
15	X	X	
16	X	X	
17	X	X	
18	X		
19	X	X	X
20	X		
21	X		
21.1	X		
21.2	X		
22	X	X	
23	X	X	X
24	X	X	X
24.1	X		
25	X		
25.1	X		
25.2	X		
25.3	X		
26	X		
26.1	X		
26.2	X	X	
27	X		
27.1	X		
28	X	X	X
29	X	X	X
30	X		

Table VI (U). Schematic Effectivity—Continued (U)

Fig. no.	NIKE-HERCULES	Improved NIKE-HERCULES	ATBM
30.1	X		
31	X	X	X
32	X	X	X
33	X	X	X
34	X	X	X
35	X	X	
35.1	X	X	X
36	X	X	
36.1	X	X	X
37	X	X	
37.1	X	X	X
38	X		
38.1	X	X	
39	X	X	X
40	X	X	X
41	X	X	X
42	X		
42.1	X		
43	X		
43.1	X		
44	X	X	X
44.1	X	X	
44.2	X	X	X
45	X	X	X
46	X		
46.1	X		
46.2	X		
46.3	X	X	X
47	X		
47.1	X	X	X
48	X		
49	X	X	X
49.1	X	X	X
49.2	X	X	X
49.3	X	X	X
49.4	X	X	X
49.5	X	X	X
49.6	X	X	X
49.7	X	X	X
49.8	X	X	X
50	X	X	X
51	X		
51.1	X	X	X
52	X	X	X
53	X	X	X
54	X	X	X
55	X		
55.1	X	X	X
56	X	X	X
57	X	X	
57.1	X	X	X
58	X		
58.1	X	X	X
59	X	X	X

Table VI (U). Schematic Effectivity—Continued (U)

Fig. no.	NIKE-HERCULES	Improved NIKE-HERCULES	ATBM
60	X	X	
60.1	X	X	X
61	X	X	X
62	X		
63	X		
63.1	X	X	
63.2	X	X	X
63.4	X	X	X
64	X		
65	X		
66	X		
67	X		
68	X		
69	X		
70		X	
71		X	
72		X	
72.1		X	
73		X	
74		X	
75		X	
76		X	
77		X	
78		X	
79		X	
80		X	X
81		X	
82		X	
83		X	
84		X	X
85		X	
86		X	
88		X	
89		X	X
90		X	X
91		X	
92		X	X
93		X	X
94		X	X
95			X
96		X	
98	X	X	X
99		X	
100		X	
101			X
102			X
103			X
104			X
105			X
106			X
107			X
108			X
109			X
110			X
111			X
112			X

Table VI (U). Schematic Effectivity—Continued (U)

Fig. no.	NIKE-HERCULES	Improved NIKE-HERCULES	ATBM
113			X
114			X
115			X
116			X
117			X
118			X
119			X
120			X
121			X
122			X
123			X
124			X
125			X
126			X
127			X
128			X

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**CHAPTER 2 (CMHA). NIKE-HERCULES SCHEMATIC DIAGRAMS**

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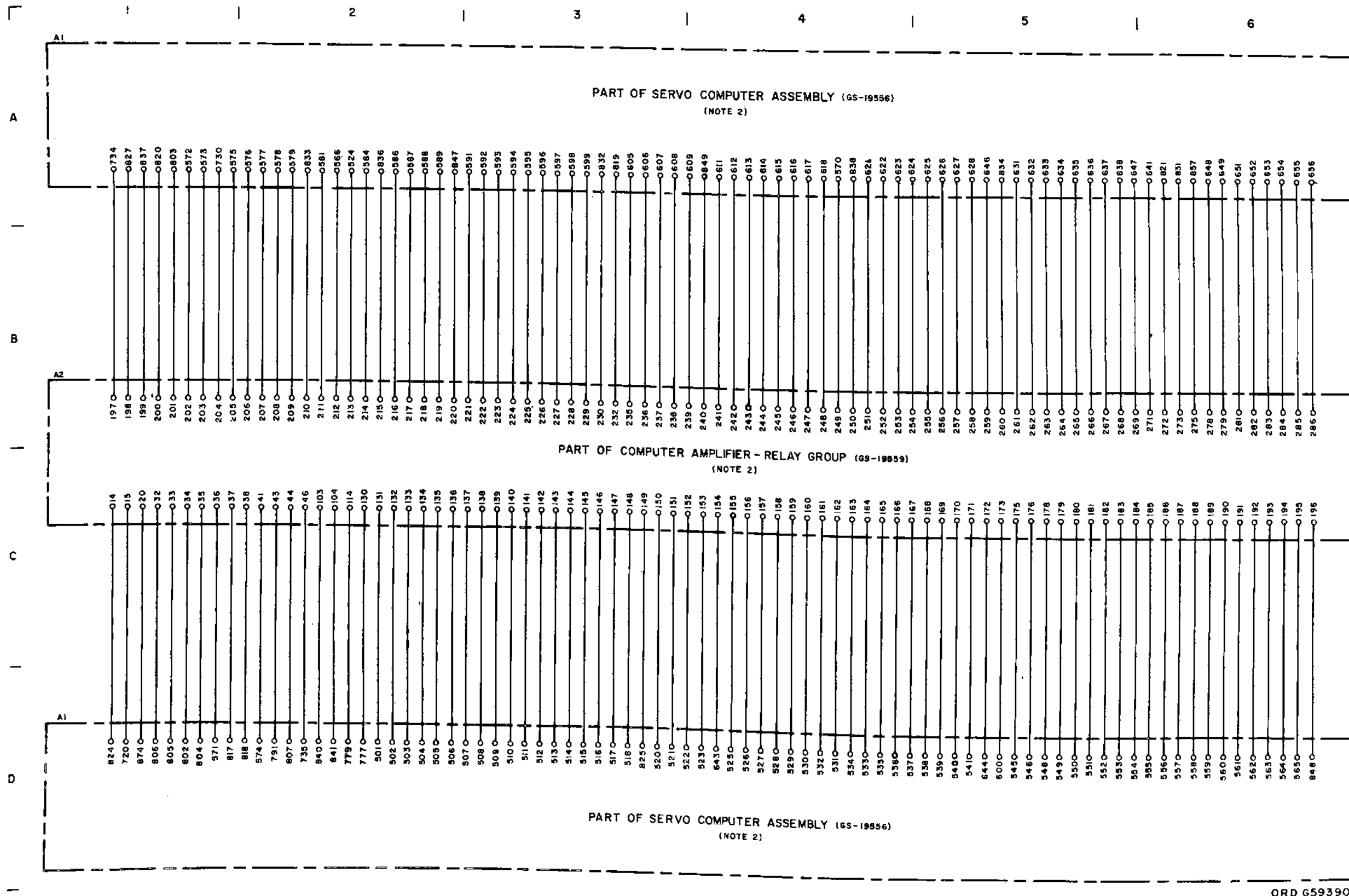


Figure 2 (U). Trailer mounted director station 9985678—schematic diagram (sheet 1 of 17).

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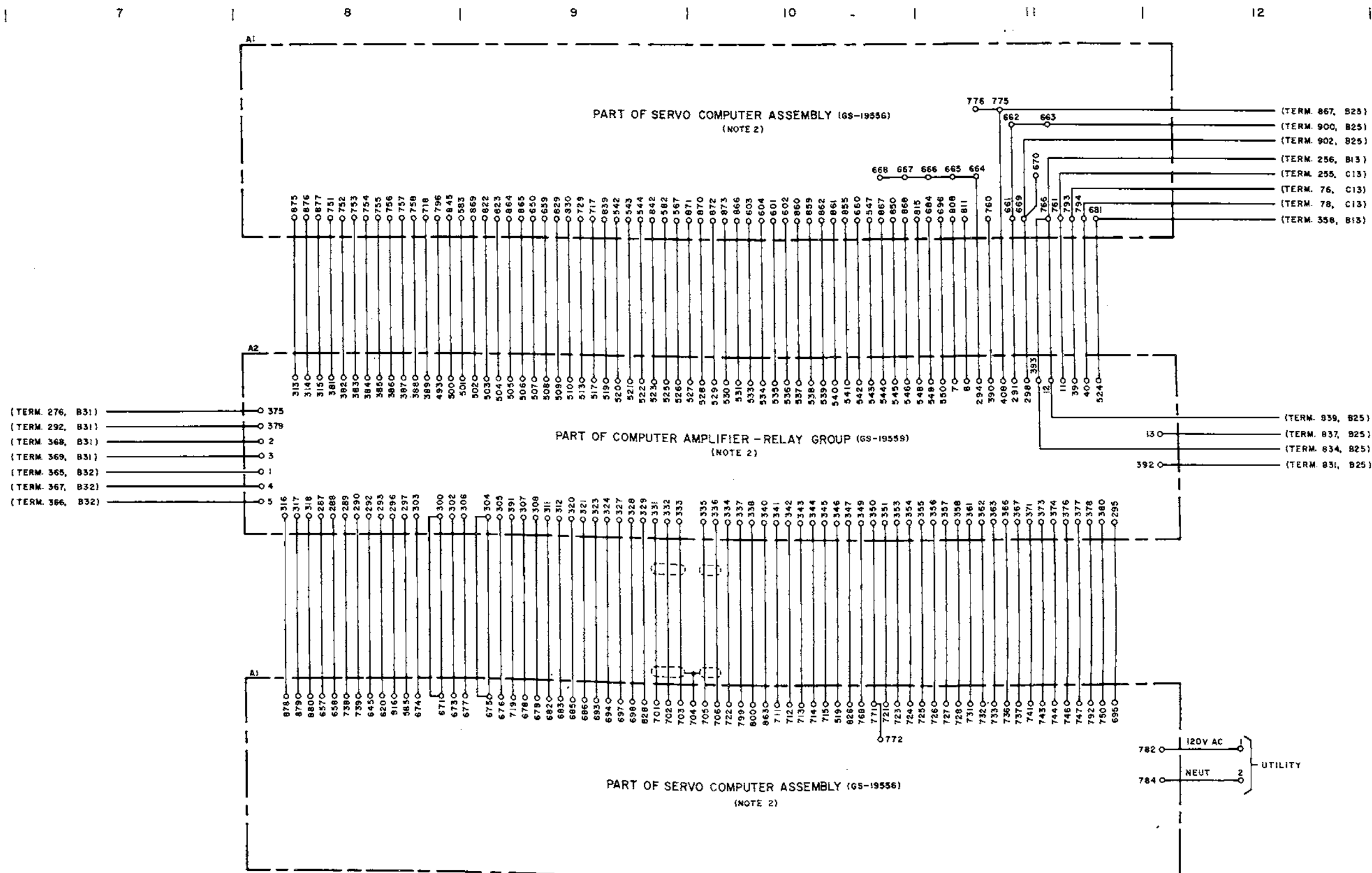
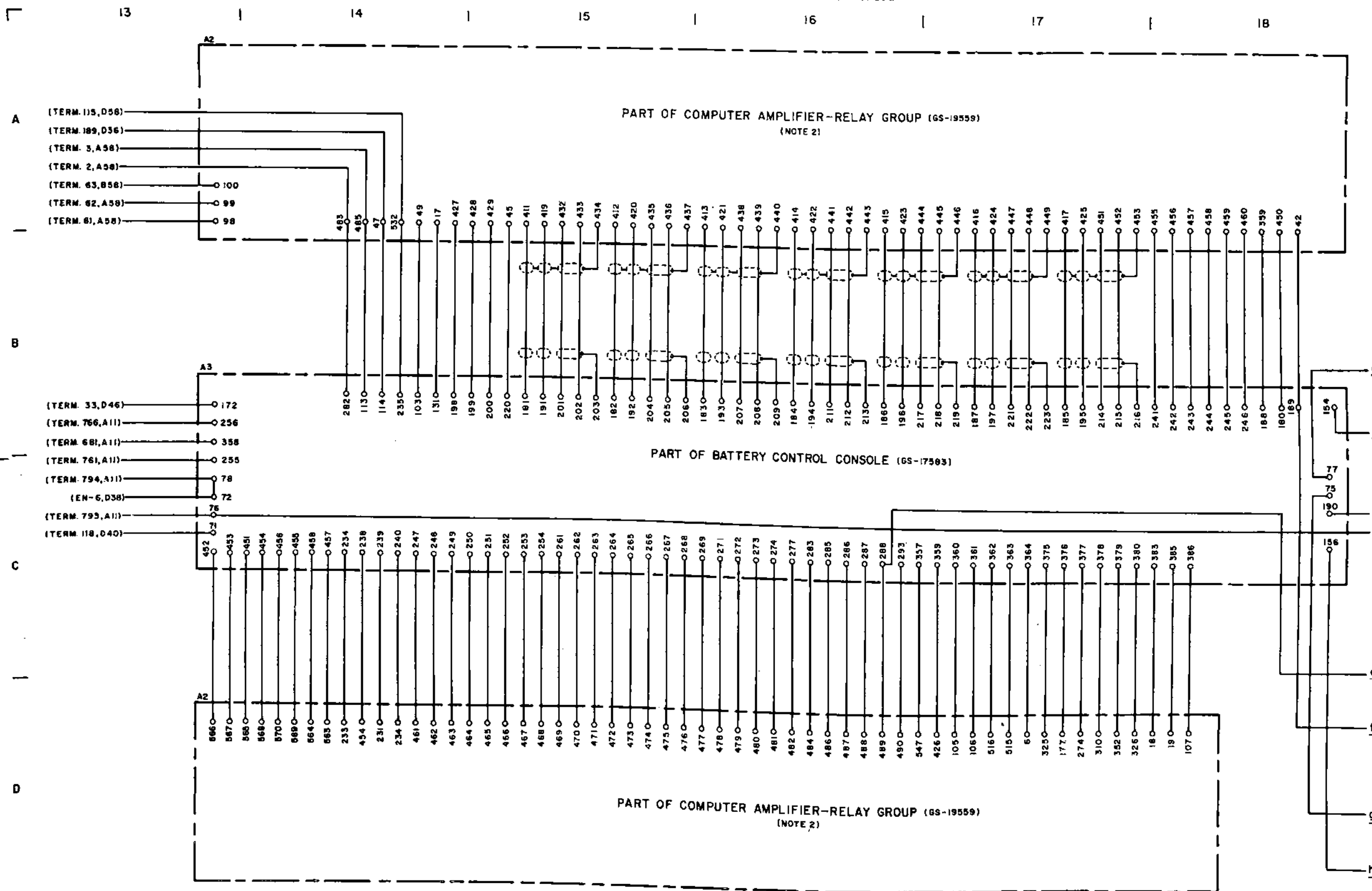


Figure 2 (U). Continued (sheet 2 of 17).

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Figure 2 (U). Continued (sheet 3 of 17).

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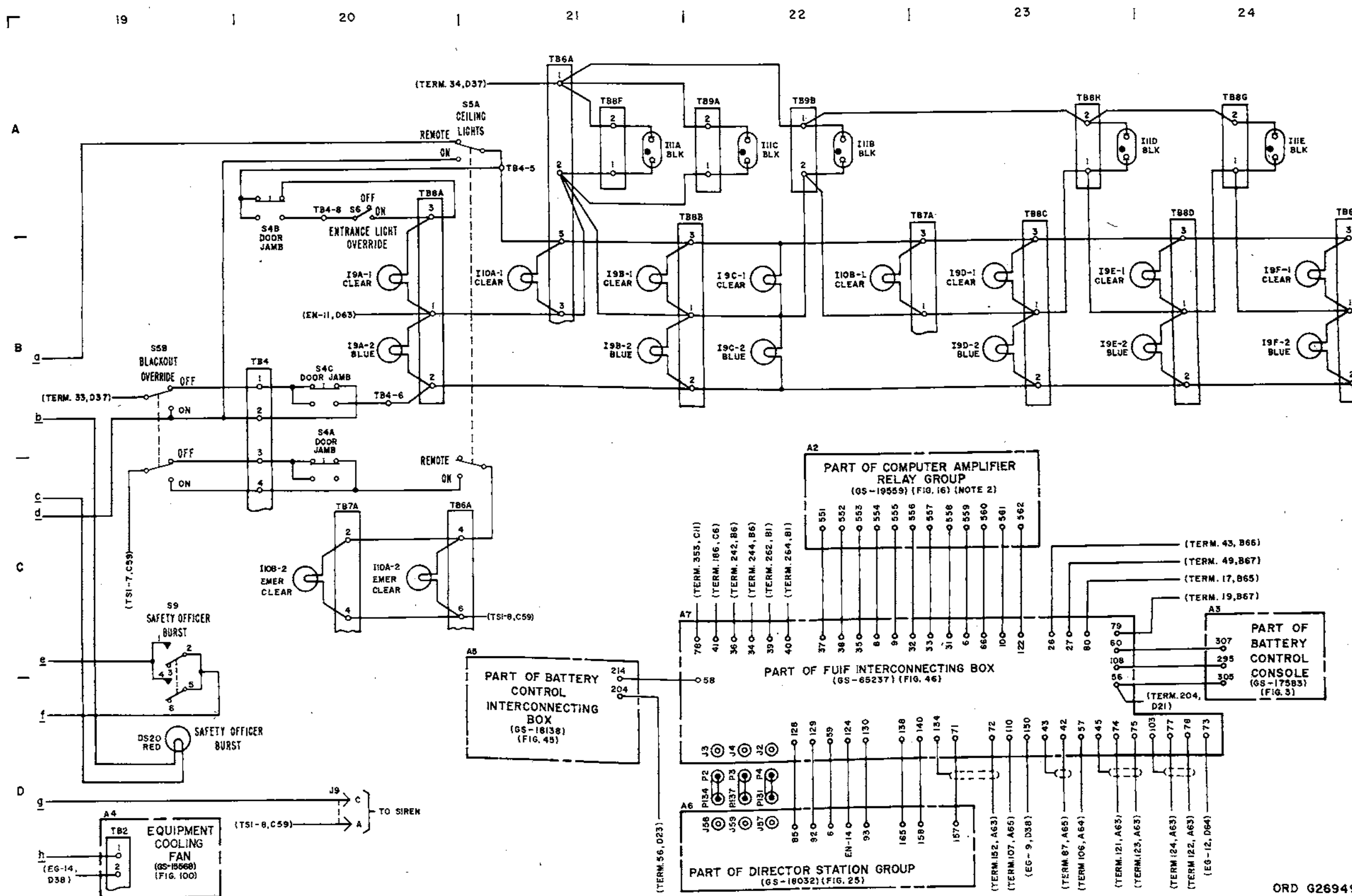


Figure 2 (U). Continued (sheet 4 of 17).

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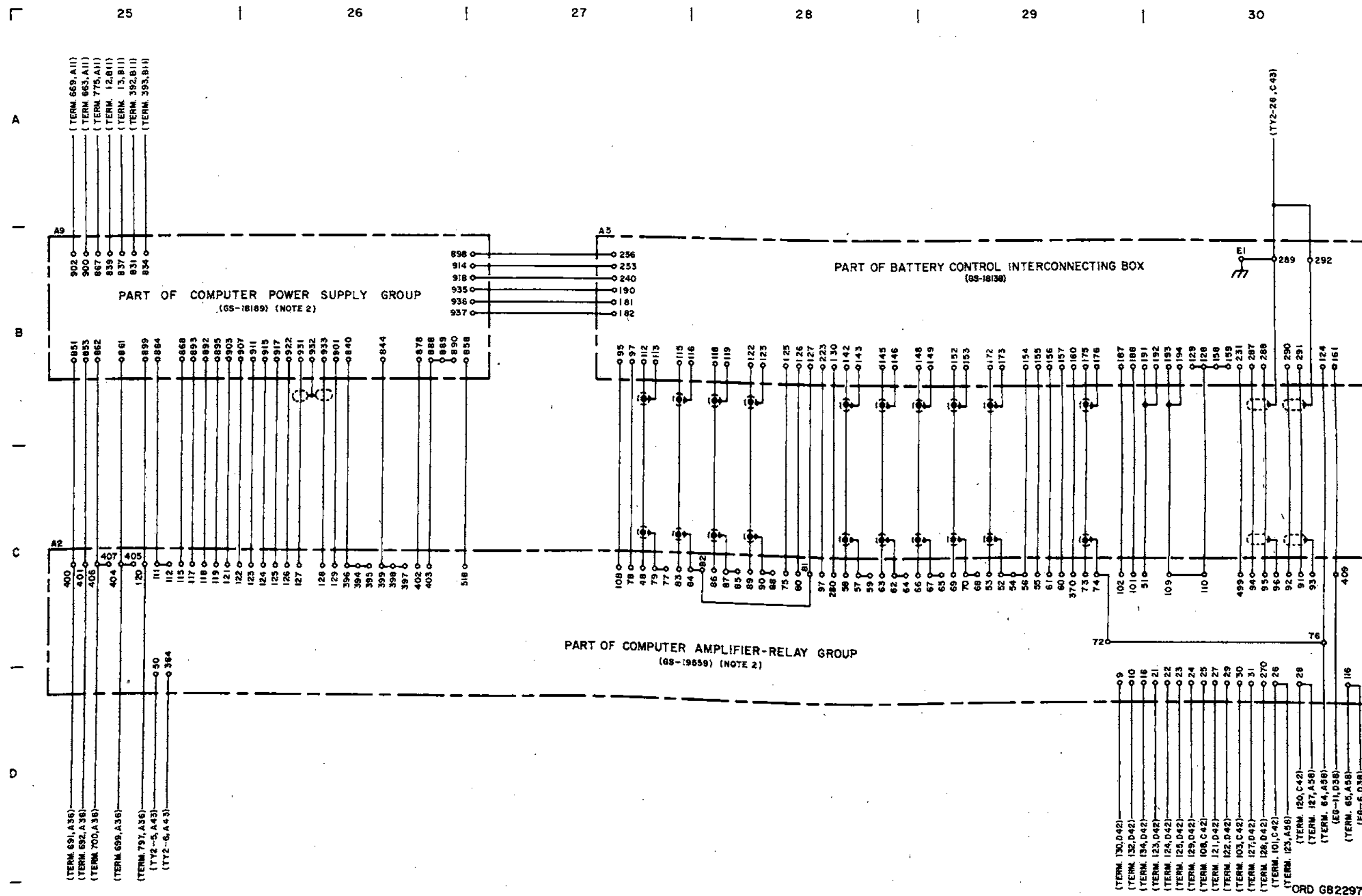
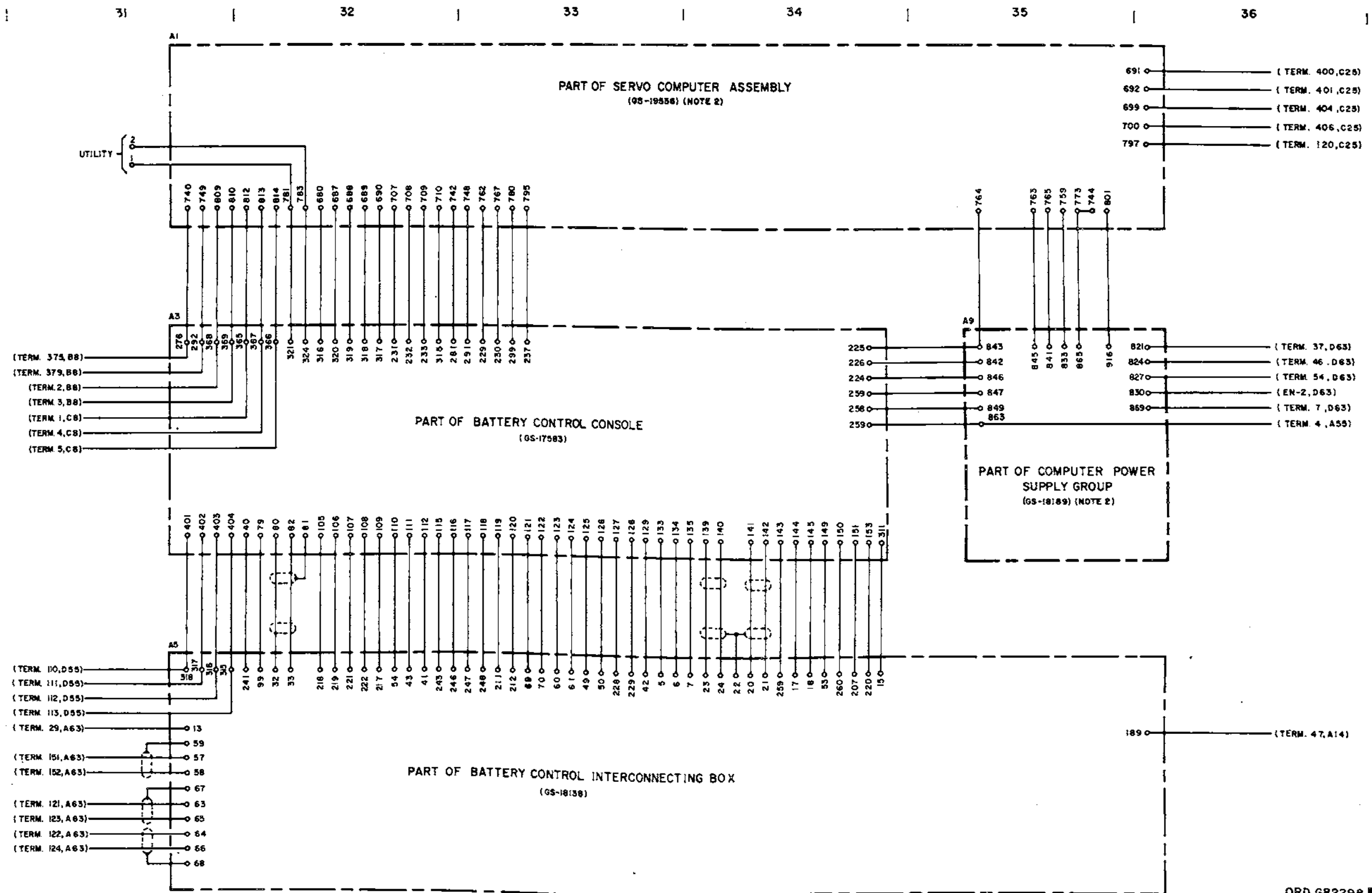


Figure 2 (U). Continued (sheet 5 of 17).

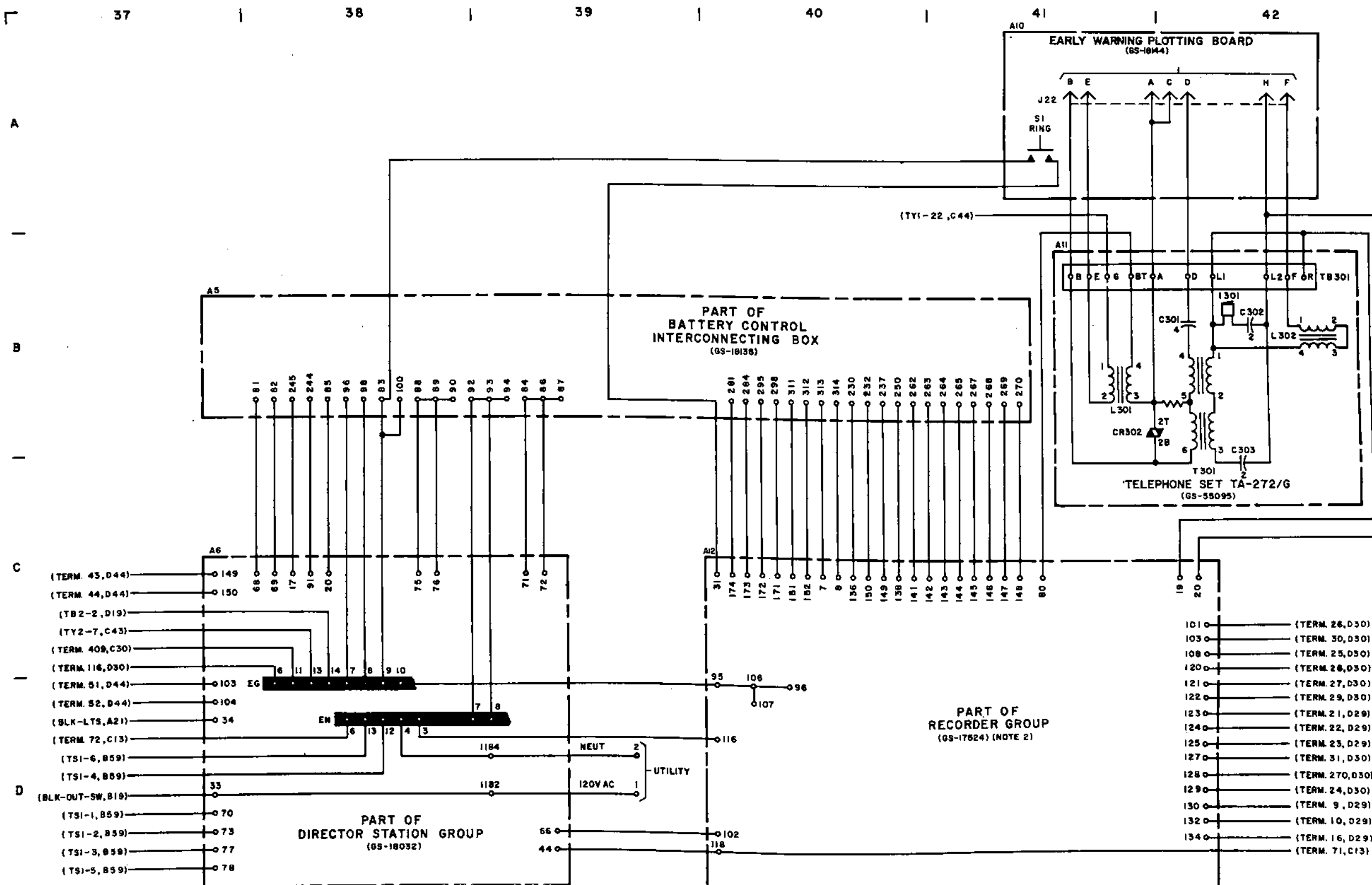
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ORD G82298

■ Figure 2 (U). Continued (sheet 6 of 17).





ORD G82299

Figure 2 (U). Continued (sheet 7 of 17).

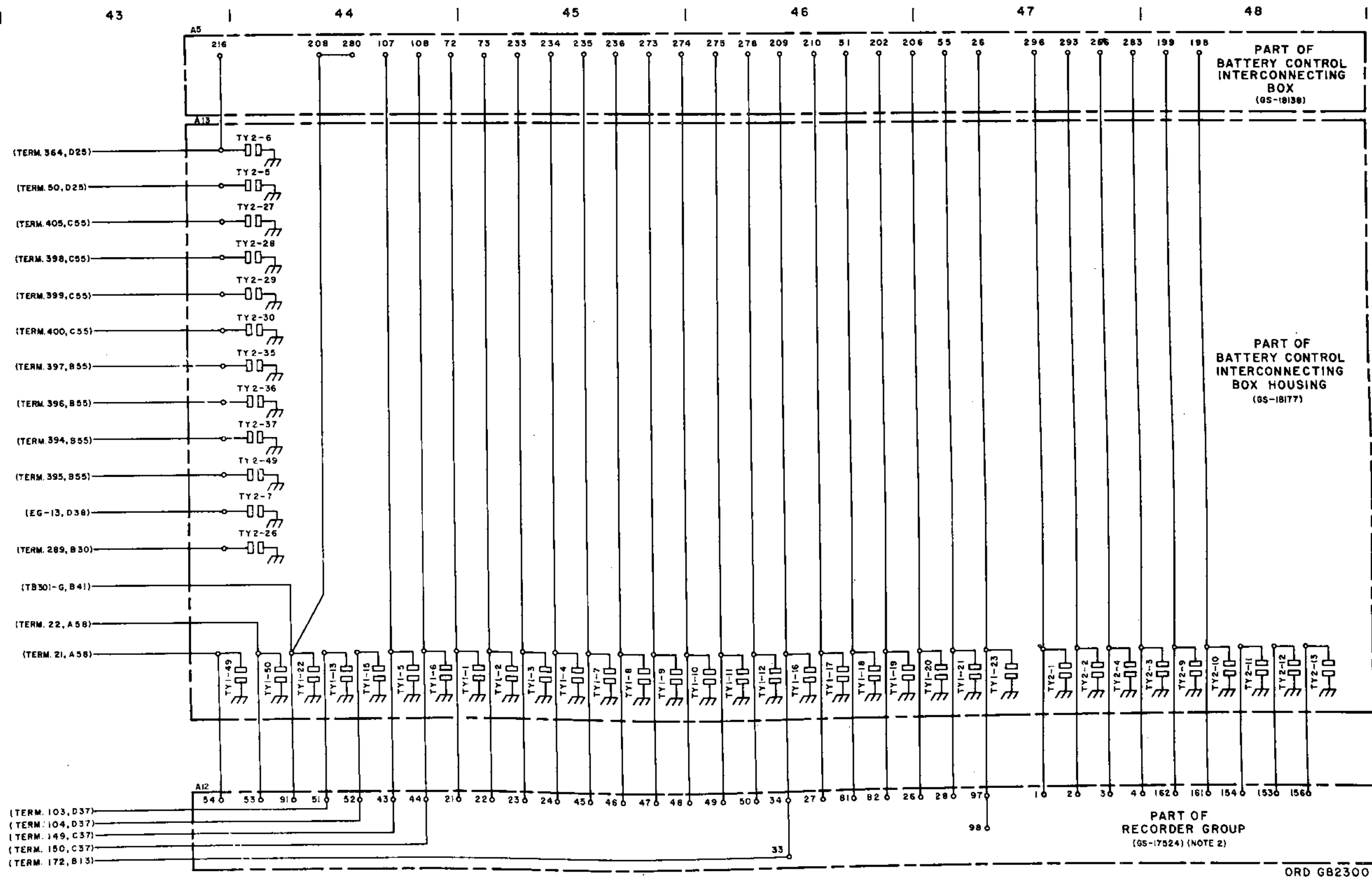
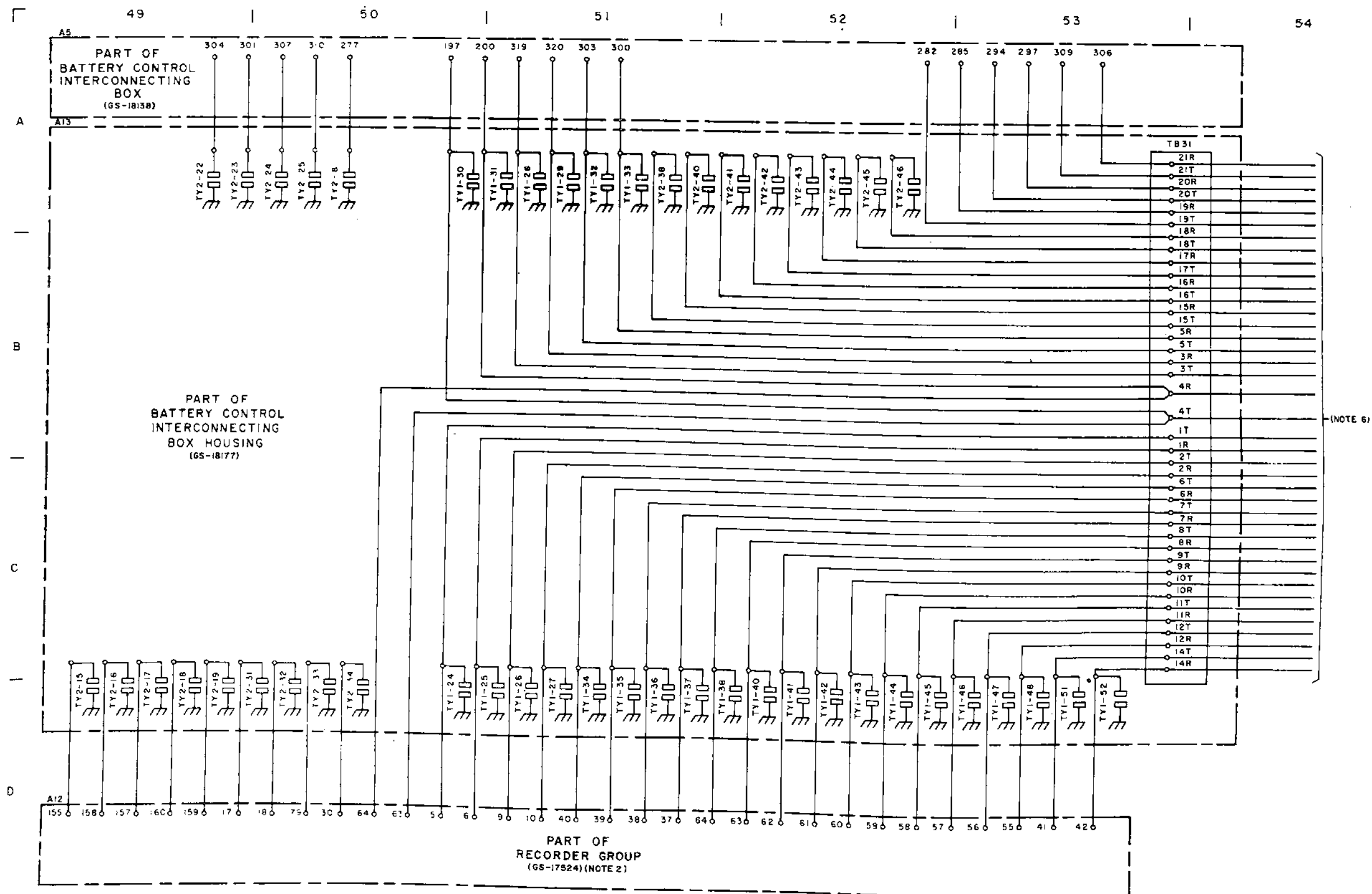


Figure 2 (U). Continued (sheet 8 of 17).



ORD 682301

Figure 2 (U). Continued (sheet 9 of 17).



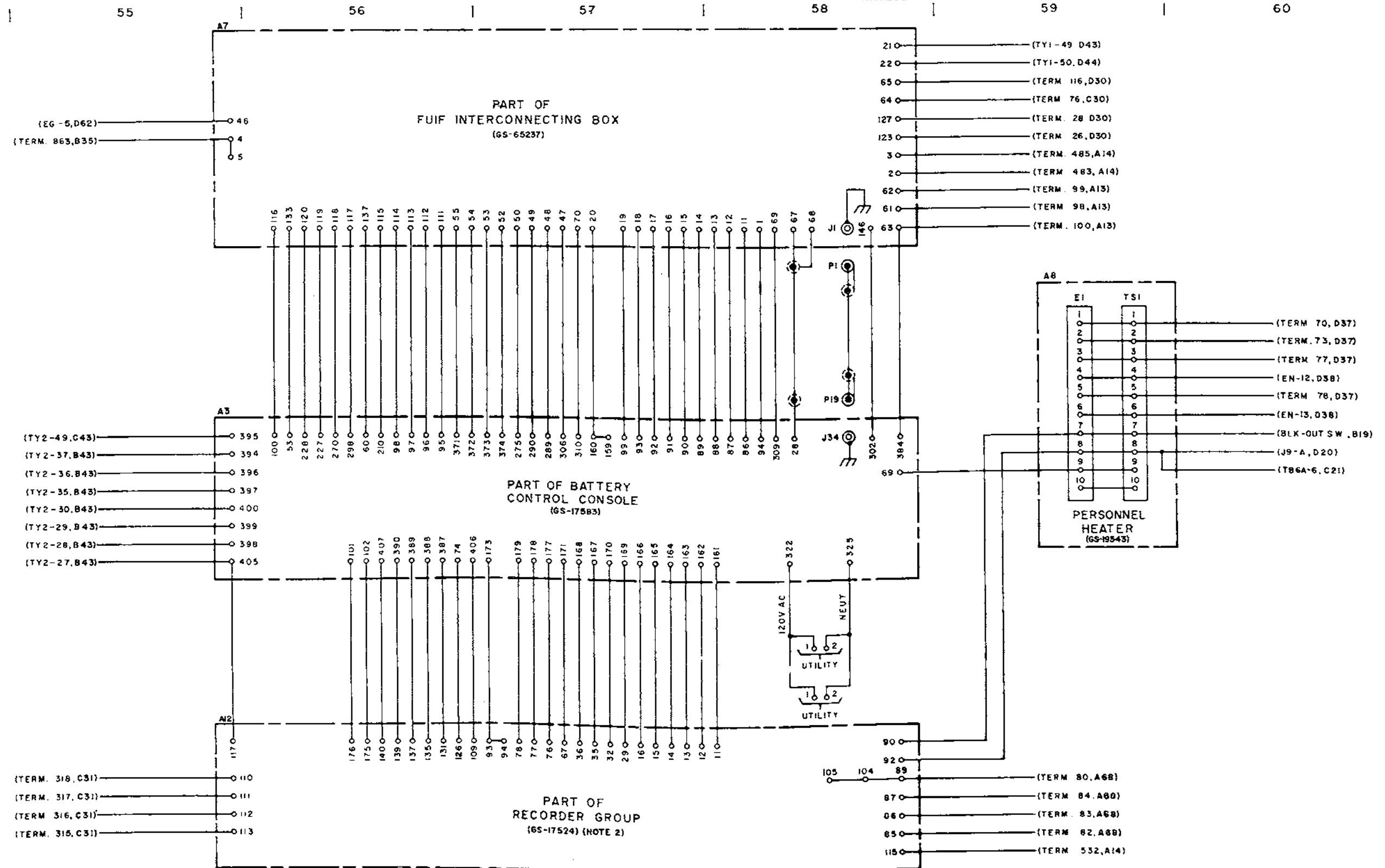
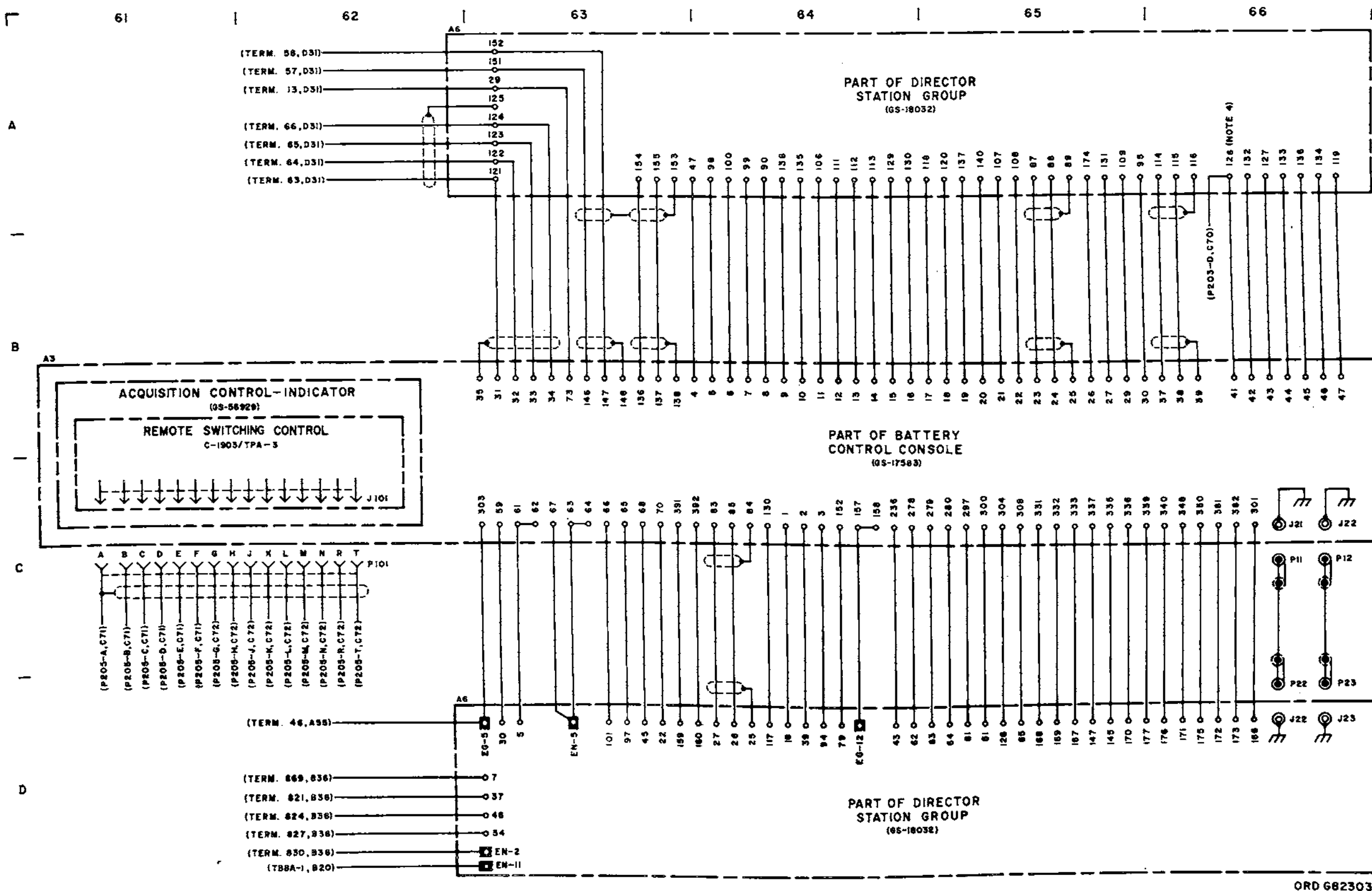


Figure 2 (U). Continued (sheet 10 of 17).

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ORD 682303

Figure 2 (U). Continued (sheet 11 of 17).

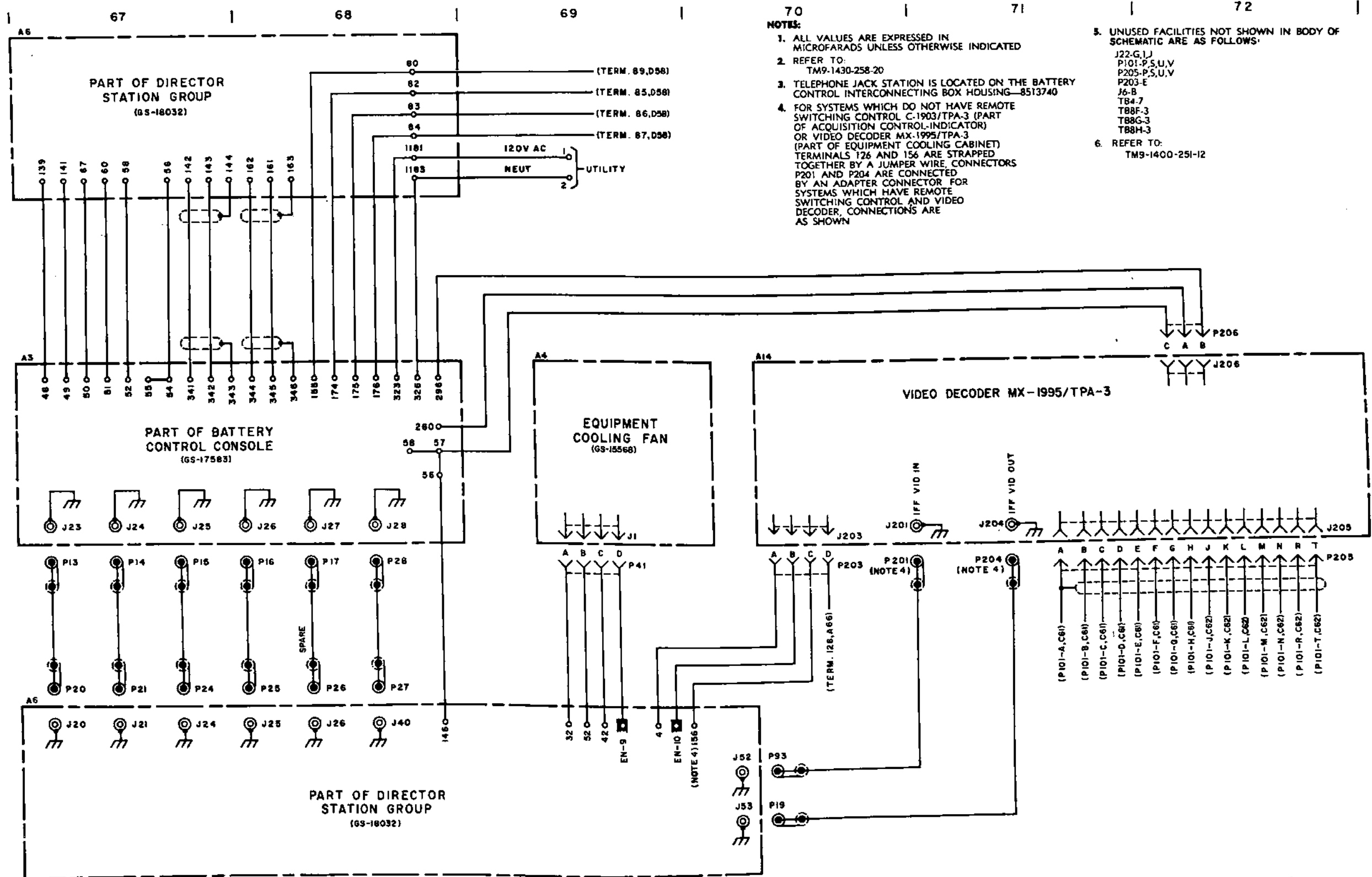


Figure 2 (U). Continued (sheet 12 of 17).

ORD 682304



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INDEX OF TERMINALS—COMPUTER AMPLIFIER—RELAY GROUP—(FIG. 16')																							
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3	C8	57	C28	111	C25	165	C4	219	B2	273	B6	327	C9	381	B8	435	A15	489	D16	543	B10		
4	C8	58	C28	112	C25	166	C4	220	B2	274	D17	328	C9	382	B8	436	A15	490	D16	544	B10		
5	C8	59	C28	113	No Conn	167	C4	221	B3	275	B6	329	C9	383	B8	437	A15	491	No Conn	545	B10		
6	D17	60	C29	114	C2	168	C5	222	B3	276	No Conn	330	No Conn	384	B8	438	A16	492	No Conn	546	B10		
7	B11	61	C29	115	C25	169	C5	223	B3	277	No Conn	331	C9	385	B8	439	A16	493	B8	547	D16		
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11	B11	65	C29	119	C25	173	C5	227	B3	281	B6	335	C10	389	B8	443	A16	497		551	C22		
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15	C1	69	C29	123	C25	177	D17	231	D14	285	B6	339	No Conn	393	B11	447	A17	501	B8	555	C22		
16	D29	70	C29	124	C26	178	C5	232	B3	286	B6	340	C10	394	C26	448	A17	502	B9	556	C22		
17	A14	71	No Conn	125	C26	179	C5	233	D14	287	C8	341	C10	395	C26	449	A17	503	B9	557	C23		
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19	D18	73	C29	127	C26	181	C5	235	B3	289	C8	343	C10	397	C26	451	A17	505	B9	559	C23		
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50	D25	104	C2	158	C4	212	B2	266	B5	320	C9	374	C11	428	A15	482	D16	536	B10				
51	C29	105	D17	159	C4	213	B2	267	B5	321	C9	375	B8	429	A15	483	A14	537	B10				
52	C29	106	D17	160	C4	214	B2	268	B5	322	No Conn	376	C11	430	No Conn	484	D16	538	B10				
53	C29	107	D18	161	C4	215	B2	269	B5	323	C9	377	C11	431	No Conn	485	A14	539	B10				
54	C29	108	C27	162	C4	216	B2	270	D30	324	C9	378	C11	432	A15	486	D16	540	B10				

Figure 2 (U). Continued (sheet 18 of 17).

CONFIDENTIAL

INDEX OF TERMINALS—SERVO COMPUTER ASSEMBLY—(FIG. 2*)															INDEX OF TERMINALS—COMPUTER POWER SUPPLY GROUP—(FIG. 49*)									
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	
501	D2	555	D6	609	A3	663	A11	717	B9	771	D10	825	D8	879	D8	901	NO CONN	955	NO CONN	999	NO CONN			
502	D2	556	D6	610	NO CONN	664	A11	718	B8	772	D10	826	D10	880	D8	902	↑	956	NO CONN	910	NO CONN			
503	D2	557	D6	611	A4	665	A11	719	D9	773	A95	827	A1			903	↑	957	NO CONN	911	B25			
504	D2	558	D6	612	A4	666	A11	720	D1	774	A95	828	D9			904	↑	958	B26	912	NO CONN			
505	D2	559	D6	613	A4	667	A10	721	D10	775	A11	829	B9			905	↑	959	NO CONN	913	NO CONN			
506	D2	560	D6	614	A4	668	A10	722	D10	776	A11	830	B9			906	↑	960	NO CONN	914	B25			
507	D8	561	D6	615	A4	669	B11	723	D10	777	D2	831	A6			907	↑	961	B25	915	B25			
508	D8	562	D6	616	A4	670	A11	724	D10	778	NO CONN	832	A3			908	↑	962	B25	916	B85			
509	D3	563	D6	617	A4	671	D8	725	D10	779	D2	833	A2			909	↑	963	B35	917	B25			
510	D3	564	D6	618	A4	672	NO CONN	726	D11	780	A83	834	A5			910	↑	964	B25	918	B25			
511	D3	565	D6	619	NO CONN	673	D8	727	D11	781	A82	835	NO CONN			911	↑	965	B35	919	NO CONN			
512	D3	566	A2	620	D8	674	D8	728	D11	782	D12	836	A2			912	↑	966	NO CONN	920	NO CONN			
513	D3	567	B9	621	A4	675	D9	729	B9	783	A82	837	A1			913	↑	967	B25	921	NO CONN			
514	D3	568	NO CONN	622	A4	676	D9	730	A1	784	D12	838	A4			914	↑	968	B25	922	B25			
515	D3	569	NO CONN	623	A4	677	D8	731	D11	785	NO CONN	839	B9			915	↑	969	B35	923	NO CONN			
516	D3	570	A4	624	A4	678	D9	732	D11	786	↑	840	D2			916	↑	870	NO CONN	924	↑			
517	D3	571	D1	625	A5	679	D9	733	D11	787	↑	841	D2			917	↑	871	↑	925	↑			
518	D3	572	A1	626	A5	680	A82	734	A1	788	↑	842	B9			918	↑	872	↑	926	↑			
519	D10	573	A1	627	A5	681	B11	735	D2	789	↑	843	NO CONN			919	↑	873	↑	927	↑			
520	D3	574	D2	628	A5	682	D9	736	D11	790	NO CONN	844	NO CONN			920	↑	874	↑	928	↑			
521	D3	575	A1	629	NO CONN	683	D9	737	D11	791	D2	845	B8			921	↑	875	↑	929	↑			
522	D4	576	A1	630	NO CONN	684	B11	738	D8	792	D11	846	NO CONN			922	↑	876	↑	930	NO CONN			
523	D4	577	A2	631	A5	685	D9	739	D8	793	B11	847	A2			923	↑	877	NO CONN	931	B25			
524	A2	578	A2	632	A5	686	D9	740	A31	794	B11	848	D6			924	↑	878	B25	932	B25			
525	D4	579	A2	633	A5	687	A82	741	D11	795	A88	849	A4			925	↑	879	NO CONN	933	B25			
526	D4	580	NO CONN	634	A5	688	A82	742	A88	796	B8	850	B10			926	↑	880	↑	934	NO CONN			
527	D4	581	A2	635	A5	689	A82	743	D11	797	A86	851	NO CONN			927	↑	881	↑	935	B25			
528	D4	582	B9	636	A5	690	A82	744	D11	798	NO CONN	852	↑			928	↑	882	↑	936	B25			
529	D4	583	B9	637	A5	691	A86	745	NO CONN	799	D10	853	↑			929	↑	883	↑	937	B25			
530	D4	584	A2	638	A5	692	A86	746	D11	800	D10	854	NO CONN			930	↑	884	↑	938	NO CONN			
531	D4	585	D8	639	NO CONN	693	D9	747	D11	801	A85	855	B10			931	↑	885	↑	939	NO CONN			
532	D4	586	A2	640	NO CONN	694	D9	748	A88	802	D1	856	NO CONN			932	↑	886	↑	940	NO CONN			
533	D4	587	A2	641	A6	695	D11	749	A81	803	A1	857	A6			933	↑	887	NO CONN					
534	D4	588	A2	642	NO CONN	696	B11	750	D11	804	D1	858	NO CONN			934	↑	888	B25					
535	D4	589	A2	643	D4	697	D9	751	B8	805	D1	859	B10			935	↑	889	B25					
536	D4	590	NO CONN	644	D5	698	D9	752	B8	806	D1	860	B10			936	↑	890	B25					
537	D4	591	A3	645	D8	699	A86	753	B8	807	D2	861	B10			937	↑	891	NO CONN					
538	D5	592	A3	646	A5	700	A86	754	B8	808	B11	862	B10			938	↑	892	B25					
539	D5	593	A3	647	A5	701	D9	755	B8	809	A81	863	D10			939	↑	893	B25					
540	D5	594	A3	648	A6	702	D9	756	B8	810	A81	864	B9			940	↑	894	NO CONN					
541	D5	595	A3	649	A6	703	D9	757	B8	811	B11	865	B9			941	↑	895	B25					
542	B9	596	A3	650	B9	704	D10	758	B8	812	A82	866	B10			942	↑	896	NO CONN					
543	B9	597	A3	651	A6	705	D10	759	A85	813	A82	867	B10			943	↑	897	NO CONN					
544	B9	598	A3	652	A6	706	D10	760	B11	814	A82	868	B10			944	↑	898	B25					
545	D5	599	A3	653	A6	707	A82	761	B11	815	B11	869	B9			945	↑	899	B25					
546	D5	600	D5	654	A6	708	A82	762	A88	816	D8	870	B10			946	↑	900	B25					
547	B10	601	B10	655	A6	709	A82	763	A85	817	D1	871	B9			947	↑	901	B25					
548	D5	602	B10	656	A6	710	A82	764	A85	818	D2	872	B10			948	↑	902	B25					
549	D5	603	B10	657	D8	711	D10	765	A85	819	A3	873	B10			949	↑	903	B25					
550	D5	604	B10	658	D8	712	D10	766	B11	820	A1	874	D1			950	↑	904	NO CONN					
551	D5	605	A3	659	B9	713	D10	767	A88	821	A6	875	A8			951	↑	905	NO CONN					
552	D5	606	A3	660	B10	714	D10	768	D10	822	B9	876	A8			952	↑	906	NO CONN					
553	D5	607	A3	661	B11	715	D10	769	NO CONN	823	B9	877	A8			953	↑	907	B25					
554	D5	608	A3	662	A11	716	NO CONN	770	NO CONN	824	D1	878	D8			954	↑	908	NO CONN					

INDEX OF TERMINALS—BATTERY CONTROL INTERCONNECTING BOX—(FIG. 45)												INDEX OF TERMINALS—BATTERY CONTROL INTERCONNECTING BOX HOUSING						INDEX OF TERMINALS—FUIF INTERCONNECTING BOX—(FIG. 46)					
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	NO CONN	56	A47	109	NO CONN	168	NO CONN	217	C82	271	NO CONN	TB31-1T	B53	TY1-13	D44	TY2-15	D49	1	B58	55	B56	109	NO CONN
2	↑	56	NO CONN	110	NO CONN	164	↑	218	C82	272	NO CONN	-1R	B53	-14	NO CONN	-16	D49	2	A58	56	D23	110	D23
3	↓	57	D81	111	NO CONN	165	↑	219	C82	273	A45	-2T	B53	-15	D44	-17	D49	3	A58	57	D23	111	B55
4	NO CONN	58	D81	112	B27	166	↑	220	C84	274	A45	-2R	C53	-16	D46	-18	D49	4	A55	58	C22	112	B56
5	C83	59	D81	113	B27	167	↑	221	C82	275	A46	-3T	B53	-17	D46	-19	D49	5	A56	59	D22	113	B56
6	C83	60	C83	114	NO CONN	168	↑	222	C82	276	A46	-3R	B53	-18	D46	-20	NO CONN	6	C23	60	C23	114	B56
7	C84	61	C83	115	B26	169	↑	223	C82	277	A50	-4T	B53	-19	D46	-21	NO CONN	7	NO CONN	61	B58	115	B66
8	NO CONN	62	NO CONN	116	B27	170	↓	224	NO CONN	278	NO CONN	-4R	B53	-20	D47	-22	A49	8	C22	62	A58	116	B56
9	↑	63	D81	117	NO CONN	171	NO CONN	225	NO CONN	279	NO CONN	-5T	B53	-21	D47	-23	A49	9	C22	63	B58	117	B56
10	↓	64	D81	118	B28	172	B29	226	NO CONN	280	A44	-5R	B53	-22	D44	-24	A50	10	C23	64	A58	118	B56
11	↑	65	D81	119	B28	173	B29	227	NO CONN	281	B40	-6T	C53	-23	D47	-25	A50	11	B58	65	A58	119	B56
12	NO CONN	66	D81	120	NO CONN	174	NO CONN	228	C83	282	A52	-6R	C53	-24	D50	-26	C44	12	B68	66	C23	120	B56
13	D81	67	D81	121	NO CONN	175	B29	229	C83	283	A47	-7T	C53	-25	D60	-27	A44	13	B57	67	B58	121	NO CONN
14	NO CONN	68	D81	122	B28	176	B29	230	B40	284	B40	-7R	C53	-26	D51	-28	B44	14	B57	68	B58	122	C23
15	C84	69	C83	123	B28	177	NO CONN	231	B30	285	A53	-8T	C53	-27	D51	-29	B44	15	B57	69	B58	123	A58
16	NO CONN	70	C83	124	B30	178	↑	232	B40	286	A47	-8R	C53	-28	A51	-30	B44	16	B57	70	B57	124	D22
17	C84	71	NO CONN	125	B28	179	↓	233	A46	287	B30	-9T	C53	-29	A51	-31	D49	17	B57	71	D23	125	NO CONN
18	C84	72	A44	126	B28	180	NO CONN	234	A45	288	B30	-9R	C53	-30	A50	-32	D60	18	B57	72	D23	126	NO CONN
19	NO CONN	73	A45	127	B28	181	B27	235	A46	289	B30	-10T	C53	-31	A50	-33	D60	19	B57	73	D22	127	A58
20	C84	74	NO CONN	128	B30	182	B27	236	A46	290	B30	-10R	C53	-32	A51	-34	D60	20	B57	74	D24	128	D22
21	C84	75	↑	129	B30	183	NO CONN	237	B40	291	B30	-11T	C53	-33	A51	-35	B44	21	A58	75	D23	129	D22
22	C84	76	↑	130	B28	184	↑	238	NO CONN	292	B30	-11R	C53	-34	D51	-36	B44	22	A58	76	D24	130	D22
23	C84	77	↑	131	NO CONN	185	↓	239	NO CONN	293	A47	-12T	C53	-35	D51	-37	C44	23	NO CONN	77	D24	131	NO CONN
24	C84	78	↓	132	↑	186	NO CONN	240	B27	294	A53	-12R	C53	-36	D51	-38	A51	24	NO CONN	78	C22	132	NO CONN
25	NO CONN	79	↓	133	↑	187	B29	241	C82	295	B40	-13T	NO CONN	-37	D51	-39	NO CONN	25	NO CONN	79	C23	133	B56
26	A47	80	NO CONN	134	↑	188	B29	242	NO CONN	296	A47	-13R	NO CONN	-38	D51	-40	A51	26	NO CONN	80	C23	134	D23
27	NO CONN	81	B88	135	↑	189	D36	243	C82	297	A53	-14T	C53	-39	NO CONN	-41	A51	27	C23	81	B58	135	NO CONN
28	↑	82	B88	136	↑	190	B29	244	B38	298	B40	-14R	C53	-40	D62	-42	A52	28	NO CONN	82	NO CONN	136	NO CONN
29	↓	83	B88	137	↑	191	B29	245	B38	299	NO CONN	-15T	B53	-41	D62	-43	A52	29	NO CONN	83	↑	137	B56
30	↓	84	B39	138	↑	192	B30	246	C82	300	A51	-15R	B53	-42	D62	-44	A52	30	NO CONN	84	↑	138	D22
31	NO CONN	85	B88	139	↓	193	B30	247	C82	301	A49	-16T	B53	-43	D62	-45	A52	31	C23	85	↑	139	NO CONN
32	C82	86	B89	140	↓	194	B30	248	C82	302	NO CONN	-16R	B53	-44	D62	-46	A52	32	C22	86	↑	140	D23
33	C82	87	B39	141	NO CONN	195	NO CONN	249	NO CONN	303	A51	-17T	B53	-45	D62	-47	NO CONN	33	C23	87	↑	141	NO CONN
34	NO CONN	88	B88	142	B28	196	NO CONN	250	B40	304	A49	-17R	B53	-46	D62	-48	NO CONN	34	C22	88	↑	142	↑
35	NO CONN	89	B88	143	B28	197	A50	251	NO CONN	305	NO CONN	-18T	B53	-47	D53	-49	C44	35	C22	89	↑	143	B56
36	NO CONN	90	B88	144	NO CONN	198	A48	252	NO CONN	306	A58	-18R	B53	-48	D53	-50	NO CONN	36	C22	90	↑	144	↑
37	↑	91	NO CONN	145	B28	199	A48	253	B27	307	A50	-19T	A58	-49	D48	-51	NO CONN	37	C22	91	↑	145	NO CONN
38	↓	92	B88	146	B28	200	A50	254	NO CONN	308	NO CONN	-19R	A58	-50	D44	-52	NO CONN	38	C22	92	↑	146	B58
39	↑	93	B89	147	NO CONN	201	NO CONN	255	NO CONN	309	A53	-20T	A58	-51	D53			39	C22	93	↑	147	NO CONN
40	NO CONN	94	B89	148	B28	202	A46	256	B27	310	A50	-20R	A58	-52	D53			40	C22	94	↑	148	NO CONN
41	C82	95	B27	149	B29	203	NO CONN	257	NO CONN	311	B40	-21T	A58					41	C22	95	↑	149	NO CONN
42	C83	96	B88	150	NO CONN	204	D21	258	NO CONN	312	B40	-21R	A58	TY2-1	D47			42	D23	96	↑	150	D23
43	C82	97	B27	151	NO CONN	205	NO CONN	259	C84	313	B40	TY1-1	D44	-2	D47			43	D23	97	↑		
44	NO CONN	98	B88	152	B29	206	A46	260	C84	314	B40	-2	D45	-3	D47			44	NO CONN	98	↑		
45	↑	99	C82	153	B29	207	C84	261	NO CONN	315	C81	-3	D46	-4	D47			45	D23	99	↑		
46	↓	100	B88	154	B29	208	A44	262	B40	316	C81	-4	D46	-5	A44			46	A55	100	↑		
47	↑	101	NO CONN	155	B29	209	A46	263	B40	317	C81	-5	D44	-6	A44			47	B57	101	↑		
48	NO CONN	102	↑	156	B29	210	A46	264	B41	318	C81	-6	D44	-7	C44			48	B57	102	NO CONN		
49	C83	103	↑	157	B29	211	C83	265	B41	319	A51	-7	D45	-8	A50			49	B57	103	D24		
50	C83	104	↑	158	B30	212	C88	266	NO CONN	320	A51	-8	D45	-9	D48			50	B57	104	NO CONN		
51	A46	105	↑	159	B30	213	NO CONN	276	B41			-9	D45	-10	D48			51	NO CONN	105			
52	NO CONN	106	NO CONN	160	B29	214	C21	268	B41			-10	D45	-11	D48			52	B57	106			
53	C84	107	A44	161	B30	215	NO CONN	269	B41			-11	D46	-12	D48			53	B57	107	NO CONN		
54	C82	108	A44	162	NO CONN	216	A48	270	B41			-12	D46	-14	NO CONN			54	B56	108	C23		

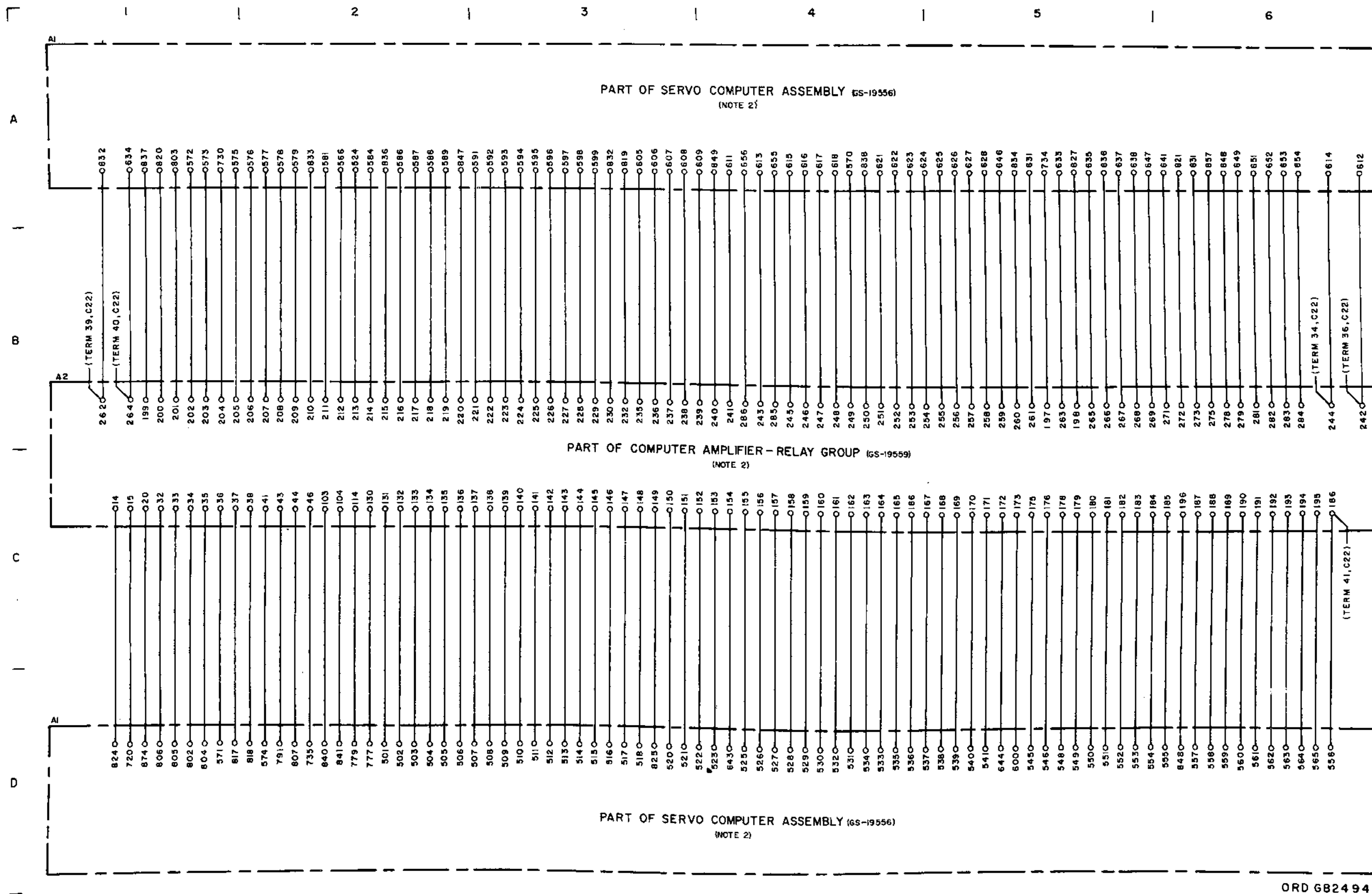
INDEX OF TERMINALS—BATTERY CONTROL CONSOLE—(FIG. 3)															INDEX OF TERMINALS—RECORDER GROUP—(FIG. 59*)									
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	
1	C64	55	B67	109	C82	163	C57	217	B16	271	C16	325	C58	379	C17	1	D47	56	D53	109	D56	163	D50	
2	C64	56	C68	110	C82	164	C57	218	B17	272	C16	326	B68	380	C17	2	D47	56	D53	110	D56	164	D50	
3	C64	57	C68	111	C82	165	C57	219	B17	273	C16	327	NO CONN	381	C66	8	D47	57	D52	111	D55	165	NO CONN	
4	B64	58	C68	112	C82	166	C57	220	B16	274	C16	328	↑	382	C66	4	D47	58	D52	112	D55	166	↑	
5	B64	59	C63	113	B14	167	C57	221	B17	275	B67	329	↓	383	C18	6	D50	59	D52	113	D55	167	↓	
6	B64	60	B65	114	B14	168	C57	222	B17	276	B81	330	NO CONN	384	B68	6	D51	60	D52	114	NO CONN	168	↓	
7	B64	61	C68	115	C82	169	C57	223	B17	277	C16	331	C65	385	C18	7	C40	61	D52	115	D58	169	↓	
8	B64	62	C68	116	C82	170	C57	224	B84	278	C64	332	C65	386	C18	8	C40	62	D52	116	D40	170	NO CONN	
9	B64	63	C68	117	C83	171	C57	225	B84	279	C65	333	C65	387	C66	9	D51	63	D52	117	D65	171	C40	
10	B64	64	C68	118	C83	172	B18	226	B84	280	C65	334	B58	388	C56	10	D51	64	D51	118	D40	172	C40	
11	B64	65	C63	119	C83	173	C57	227	B56	281	B82	335	C65	389	C66	11	D58	65	NO CONN	119	NO CONN	173	C40	
12	B64	66	C63	120	C83	174	B68	228	B56	282	B14	336	C65	390	C66	12	D58	66	NO CONN	120	C42	174	C40	
13	B64	67	C63	121	C83	175	B68	229	B53	283	C16	337	C65	391	C63	13	D57	67	D57	121	C42	175	D56	
14	B64	68	C63	122	C83	176	B68	230	B53	284	NO CONN	338	B56	392	C63	14	D57	68	NO CONN	122	D42	176	D56	
15	B64	69	B58	123	C83	177	C57	231	B82	285	C16	339	C65	393	NO CONN	15	D57	69	↑	123	D42	177	NO CONN	
16	B64	70	C63	124	C83	178	C57	232	B82	286	C16	340	C66	394	B55	16	D57	70	↑	124	D42	178	↑	
17	B65	71	C18	125	C83	179	C57	233	B82	287	C16	341	B67	395	B55	17	D49	71	↑	125	D42	179	↑	
18	B65	72	C18	126	C83	180	B18	234	C14	288	C16	342	B67	396	B55	18	D50	72	↑	126	D56	180	↑	
19	B65	73	B68	127	C83	181	B15	235	B14	289	B67	343	B67	397	B55	19	C42	73	↑	127	D42	181	↑	
20	B65	74	C66	128	C83	182	B15	236	C64	290	B67	344	B68	398	C55	20	C42	74	↑	128	D42	182	↑	
21	B65	75	C18	129	C83	183	B16	237	B88	291	B83	345	B68	399	C55	21	D44	75	NO CONN	129	D42	183	↑	
22	B66	76	C18	130	C64	184	B16	238	C14	292	B81	346	B68	400	C55	22	D45	76	D57	130	D42	184	↑	
23	B66	77	C18	131	B14	185	B17	239	C14	293	C16	347	NO CONN	401	C31	23	D45	77	D57	131	D56	185	↑	
24	B66	78	C18	132	NO CONN	186	B16	240	C14	294	C24	348	C66	402	C31	24	D45	78	D57	132	D42	186	↑	
25	B65	79	C82	133	C83	187	B17	241	B18	295	D24	349	NO CONN	403	C31	25	NO CONN	79	D50	133	NO CONN	187	↑	
26	B65	80	C82	134	C83	188	B18	242	B18	296	B68	350	C66	404	C31	26	D46	80	C41	134	D42	188	↑	
27	B65	81	C82	135	C84	189	B18	243	B18	297	C65	351	NO CONN	405	C65	27	D46	81	D46	135	D56	189	↑	
28	B65	82	C82	136	B68	190	C18	244	B18	298	B66	352	↑	406	C66	28	D47	82	D46	136	C40	190	↑	
29	B65	83	C64	137	B68	191	B15	245	B18	299	B83	353	↑	407	C55	29	D57	83	NO CONN	137	D56	191	↑	
30	B65	84	C64	138	B63	192	B15	246	B18	300	C65	354	↑	408	NO CONN	30	D50	84	NO CONN	138	C40	192	↑	
31	B63	85	C64	139	C84	193	B16	247	C14	301	C66	355	↑	409	NO CONN	31	C40	85	D58	139	D56	193	↑	
32	B63	86	B68	140	C84	194	B16	248	C14	302	B68	356	NO CONN	410	NO CONN	32	D57	86	D58	140	D56	194	↑	
33	B63	87	B68	141	C84	195	B17	249	C14	303	C68	357	C17			33	D46	87	D58	141	C40	195	↑	
34	B63	88	B68	142	C84	196	B16	250	C15	304	C65	358	B13			34	D46	88	NO CONN	142	C40	196	↑	
35	B63	89	B67	143	C84	197	B17	251	C15	305	D24	359	C17	451	C14	35	D57	89	D58	143	C41	197	↑	
36	NO CONN	90	B57	144	C84	198	B14	252	C15	306	B57	360	C17	452	C13	36	D57	90	D58	144	C41	198	↑	
37	B66	91	B57	145	C84	199	B15	253	C15	307	C24	361	C17	453	C13	37	D51	91	D44	145	C41	199	↑	
38	B66	92	B57	146	B68	200	B15	254	C15	308	C65	362	C17	454	C14	38	D51	92	D58	146	C41	200	NO CONN	
39	B66	93	B57	147	B68	201	B15	255	C18	309	B68	363	C17	455	C14	39	D51	93	D57	147	C41		↑	
40	C82	94	B68	148	B63	202	B15	256	B18	310	B57	364	C17	456	C14	40	D51	94	D57	148	C41		↑	
41	B66	95	B66	149	C84	203	B15	257	B84	311	C84	365	B31	457	C14	41	D58	95	D40	149	C40		↑	
42	B66	96	B66	150	C84	204	B15	258	B84	312	NO CONN	366	B82	458	C14	42	D53	96	D40	150	C40		↑	
43	B66	97	B66	151	C84	205	B15	259	B84	313	NO CONN	367	B82	459	NO CONN	43	D44	97	D47	151	C40		↑	
44	B66	98	B66	152	C84	206	B16	260	B68	314	NO CONN	368	B81	460	NO CONN	44	D44	98	D47	152	C40		↑	
45	B66	99	B57	153	C84	207	B16	261	C15	315	B82	369	B81			45	D45	99	NO CONN	153	D48		↑	
46	B66	100	B56	154	B18	208	B16	262	C15	316	B82	370	NO CONN			46	D46	100	NO CONN	154	D48		↑	
47	B66	101	C66	155	B68	209	B16	263	C15	317	B82	371	B56			47	D45	101	C42	155	D49		↑	
48	B67	102	C66	156	C18	210	B66	264	C15	318	B82	372	B56			48	D45	102	D40	156	D48		↑	
49	B67	103	B14	157	C54	211	B16	265	C15	319	B82	373	B57			49	D46	103	C42	157	D49		↑	
50	B67	104	NO CONN	158	C64	212	B16	266	C15	320	B82	374	B57			50	D46	104	D58	158	D49		↑	
51	B67	105	C82	159	B57	213	B16	267	C15	321	B82	375	C17			51	D44	105	D58	159	D49		↑	
52	B67	106	C82	160	B57	214	B17	268	C16	322	C58	376	C17			52	D44	106	D40	160	D49		↑	
53	B66	107	C82	161	C58	215	B17	269	C16	323	B68	377	C17			53	D44	107	D40	161	D48		↑	
54	B67	108	C82	162	C57	216	B17	270	B56	324	B82	378	C17			54	D43	108	C42	162	D48		↑	



INDEX OF TERMINALS—DIRECTOR STATION GROUP— (FIG. 25)								INDEX OF TERMINALS— UTILITY CABINET—(FIG. 50)			
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	NO CONN	55	NO CONN	109	A65	168	A68	TB2-1	D19		
2	NO CONN	56	A67	110	NO CONN	164	NO CONN	TB2-2	D19		
3	NO CONN	57	NO CONN	111	A64	165	D22				
4	D69	58	A67	112	A64	166	D66				
5	D63	59	NO CONN	113	A64	167	D66				
6	D22	60	A67	114	A66	168	D66				
7	D63	61	NO CONN	115	A66	169	D66				
8	NO CONN	62	D64	116	A66	170	D66				
9	↑	63	D65	117	D64	171	D66				
10	↑	64	D65	118	A66	172	D66				
11	↑	65	D65	119	A66	173	D66				
12	↑	66	D89	120	A65	174	A66				
13	↑	67	A67	121	A69	175	D66				
14	↑	68	C88	122	A68	176	D66				
15	↑	69	C88	123	A68	177	D66				
16	NO CONN	70	D87	124	A69						
17	C88	71	C89	125	A63	1181	A68				
18	D64	72	C89	126	A66	1182	D39				
19	NO CONN	73	D37	127	A66	1183	A68				
20	C88	74	NO CONN	128	D66	1184	D89				
21	NO CONN	75	C88	129	A64						
22	D63	76	C88	130	A64	EG-1	NO CONN				
23	NO CONN	77	D87	131	A65	-2	↑				
24	NO CONN	78	D87	132	A66	-3	↑				
25	D64	79	D64	133	A66	-4	NO CONN				
26	D64	80	A68	134	A66	-5	D63				
27	D64	81	D65	135	A64	-6	D38				
28	NO CONN	82	A68	136	A66	-7	D38				
29	A63	83	A68	137	A66	-8	D38				
30	D68	84	A68	138	A64	-9	D38				
31	NO CONN	85	D22	139	A67	-10	D38				
32	D69	86	NO CONN	140	A65	-11	D38				
33	D87	87	A65	141	A67	-12	D64				
34	D87	88	A66	142	A67	-13	D38				
35	NO CONN	89	A66	143	A67	-14	D38				
36	NO CONN	90	A64	144	A67	-15	NO CONN				
37	D63	91	C88	145	D66						
38	NO CONN	92	D22	146	D68	EN-1	NO CONN				
39	D64	93	D22	147	D65	-2	D63				
40	NO CONN	94	D64	148	NO CONN	-3	D38				
41	NO CONN	95	A65	149	C87	-4	D38				
42	D69	96	NO CONN	150	C87	-5	D68				
43	D64	97	D63	151	A68	-6	D38				
44	D89	98	A64	152	D22	-7	D89				
45	D63	99	A64	153	A68	-8	D89				
46	D68	100	A64	154	A68	-9	D69				
47	A64	101	D63	155	A63	-10	D69				
48	NO CONN	102	NO CONN	156	D69	-11	D68				
49	NO CONN	103	D87	157	D28	-12	D38				
50	NO CONN	104	D87	158	D28	-13	D38				
51	D65	105	NO CONN	159	D68	-14	D22				
52	D69	106	A64	160	D69	-15	NO CONN				
53	NO CONN	107	A65	161	A68						
54	D63	108	A65	162	A68						

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
A1					9000324	GS-19556
A2					9000326	GS-19559
A3					8173147	GS-17583
A4					8010350	GS-15568
A5					8512908	GS-18138
A6					8513626	GS-18032
A7					9013084	GS-65237
A8					9005301	GS-19543
A9					8517797	GS-18189
A10					8512882	GS-18144
A11					8010134	GS-55095
C301	4	10		600	7593727	
C302,C303	2	10		600	7593726	
CR302					8024363	
I301					7653456	
L301,L302					8007179	
T301					8007193	
TB301					8175113	
A12					8019167	GS-17524
A13					8513740	GS-18177
TB31					8008374	
TY1,TY2					8008898	
A14					MS-1995/TPA-3	Video decoder
I9A-1			25	120	8330088	
I9A-2			6	120	8328090	
I9B-1			25	120	8330088	
I9B-2			6	120	8328090	
I9C-1			25	120	8330088	
I9C-2			6	120	8328090	
I9D-1			25	120	8330088	
I9D-2			6	120	8328090	
I9E-1			25	120	8330088	
I9E-2			6	120	8328090	
I9F-1			25	120	8330088	
I9F-2			6	120	8328090	
I10A-1			25	120	8338088	
I10A-2				24-28	193048	
I10B-1			25	120	8338088	
I10B-2				24-28	193048	
I11A thru			8		8331295	
I11E						
I20					572994	
J9					7720490	
J22					8175623	
P1					MS35170	
P11 thru P17					MS35170	
P19 thru P28					MS35170	
P41					8019387	
P93					MS35170	
P101					MS3106A22-14S	
P201					MS35170	
P203					MS3106214-5S	
P204					MS35170	
P205					MS3106A22-14P	
P206					MS3106A14S-7P	
S1				24	7602615	
S4					MS35100-3	
S5				125	8019910	

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
S6					502688	
S9					MS35059-17	
TB4					7619754	
TB6A					8219431	
TB7A					8219432	
TB8A thru					8219433	
TB8H						
TB9A,TB9B					8019835	



ORD 682494

Figure 2.1 (U). Trailer mounted director station 9985689—schematic diagram (sheet 1 of 18). (U).

CONFIDENTIAL

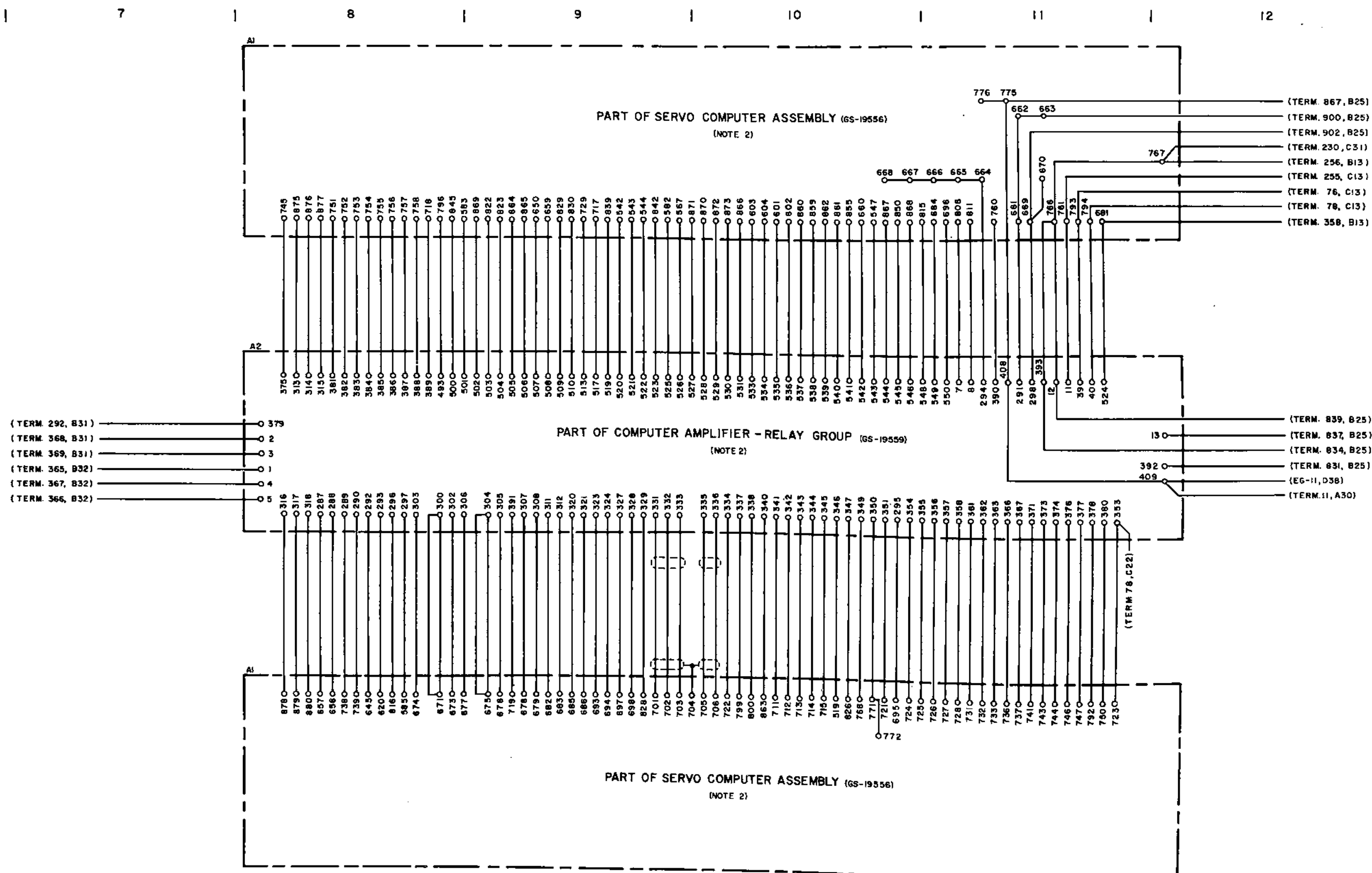


Figure 2.1 (U). Continued (sheet 2 of 18).

CONFIDENTIAL

ORD 682581

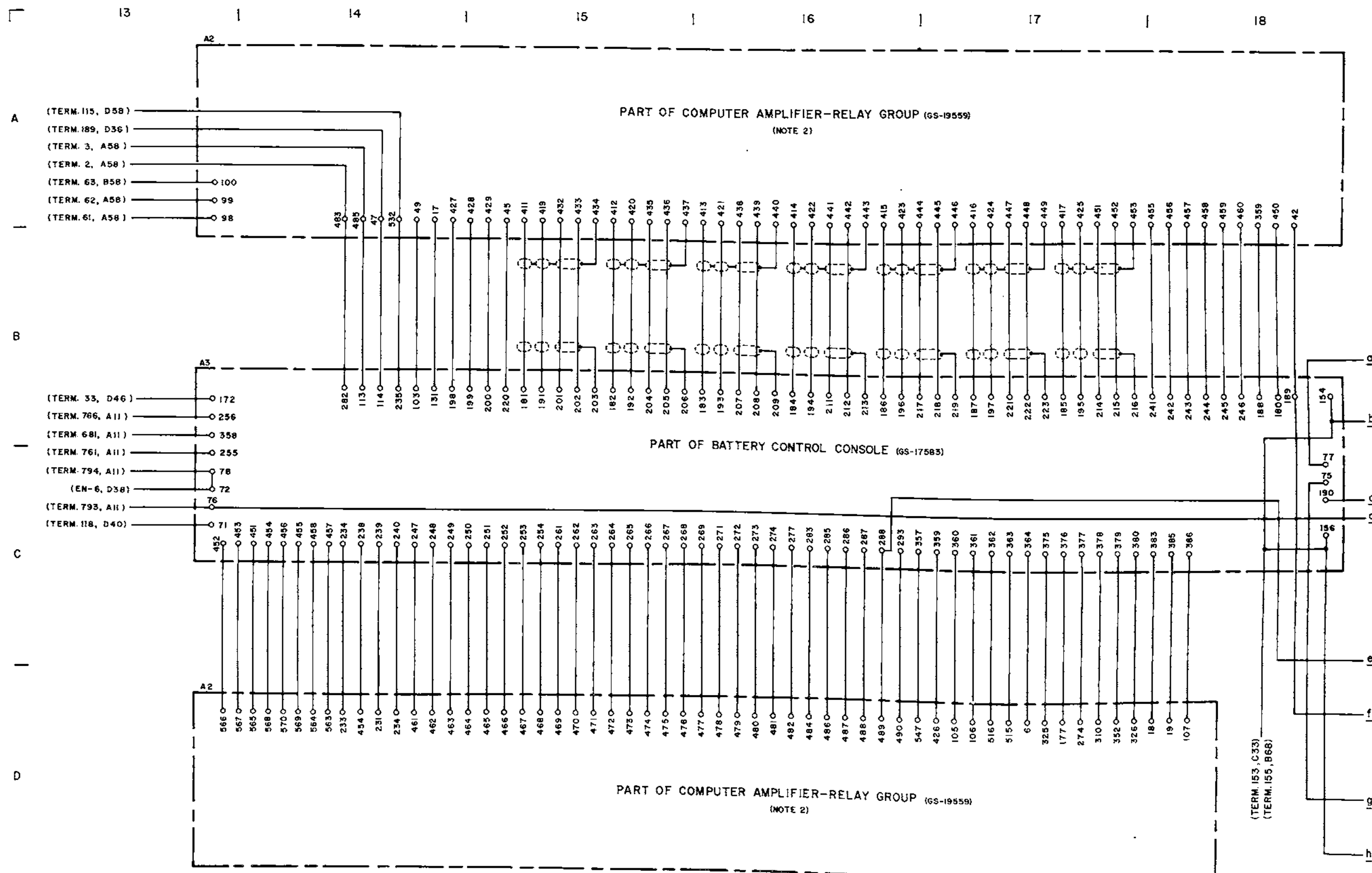


Figure 2.1 (U). Continued (sheet 3 of 18).



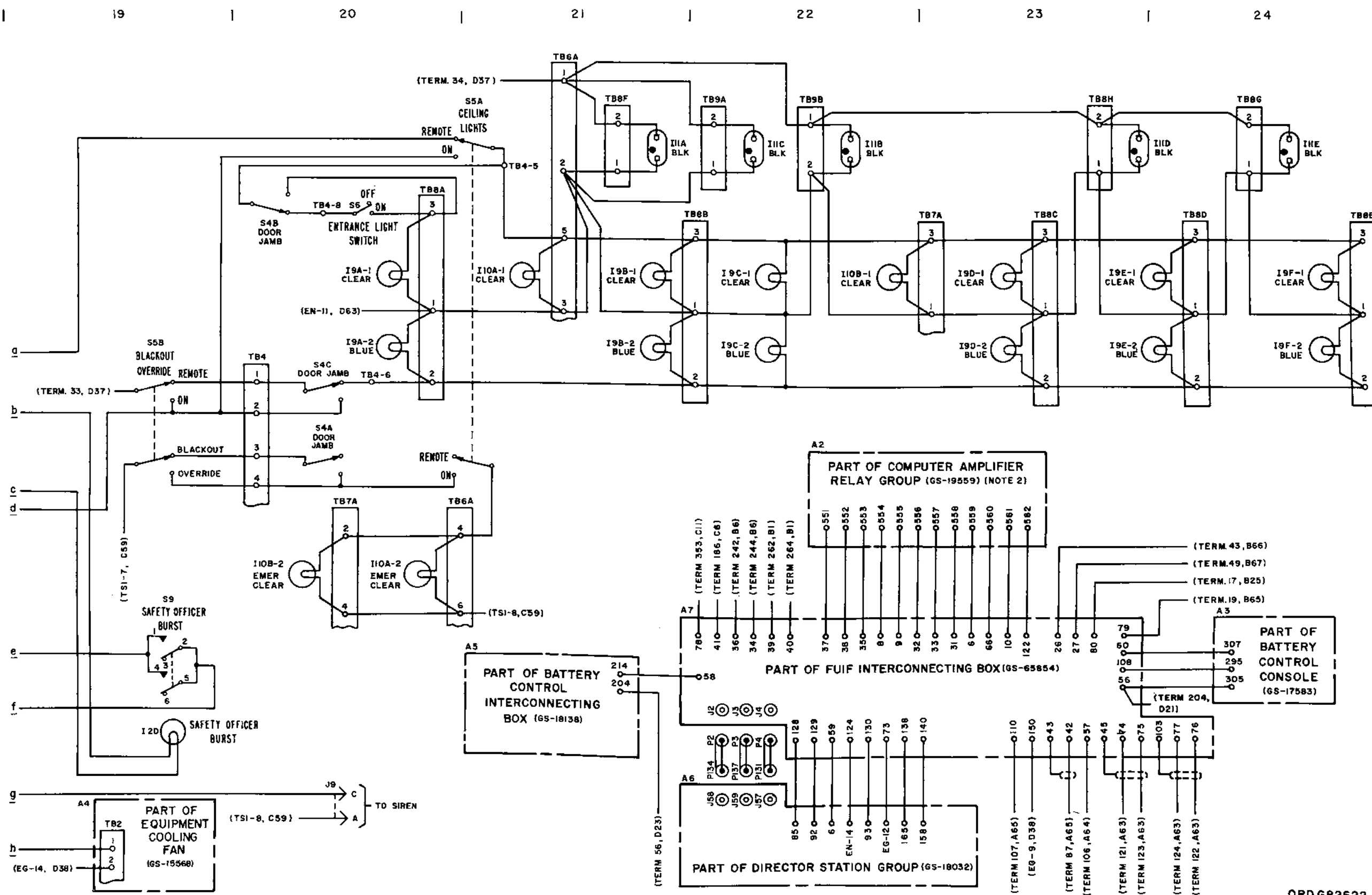


Figure 2.1 (U). Continued (sheet 4 of 18).

**CONFIDENTIAL**

ORD G82622

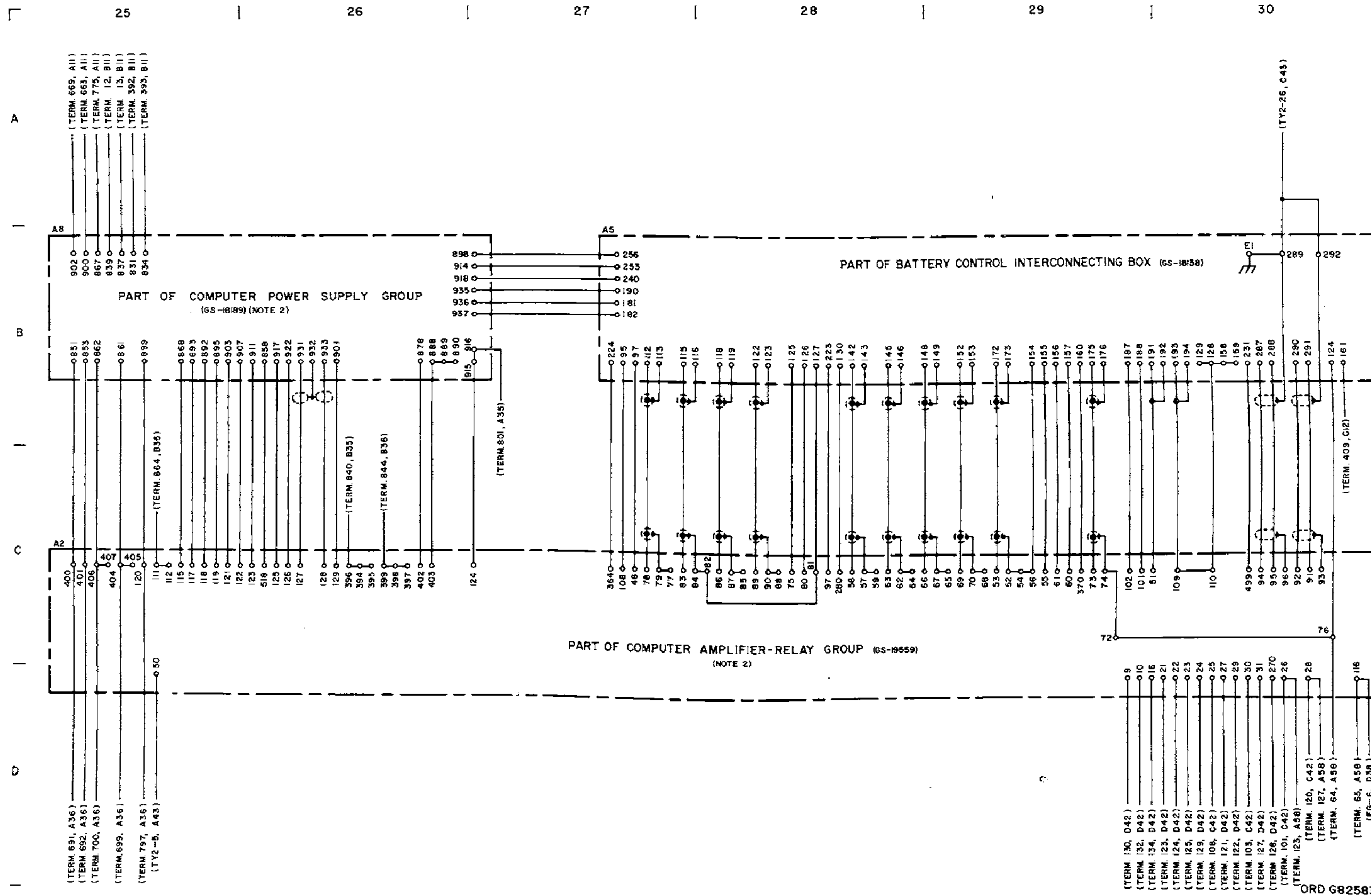
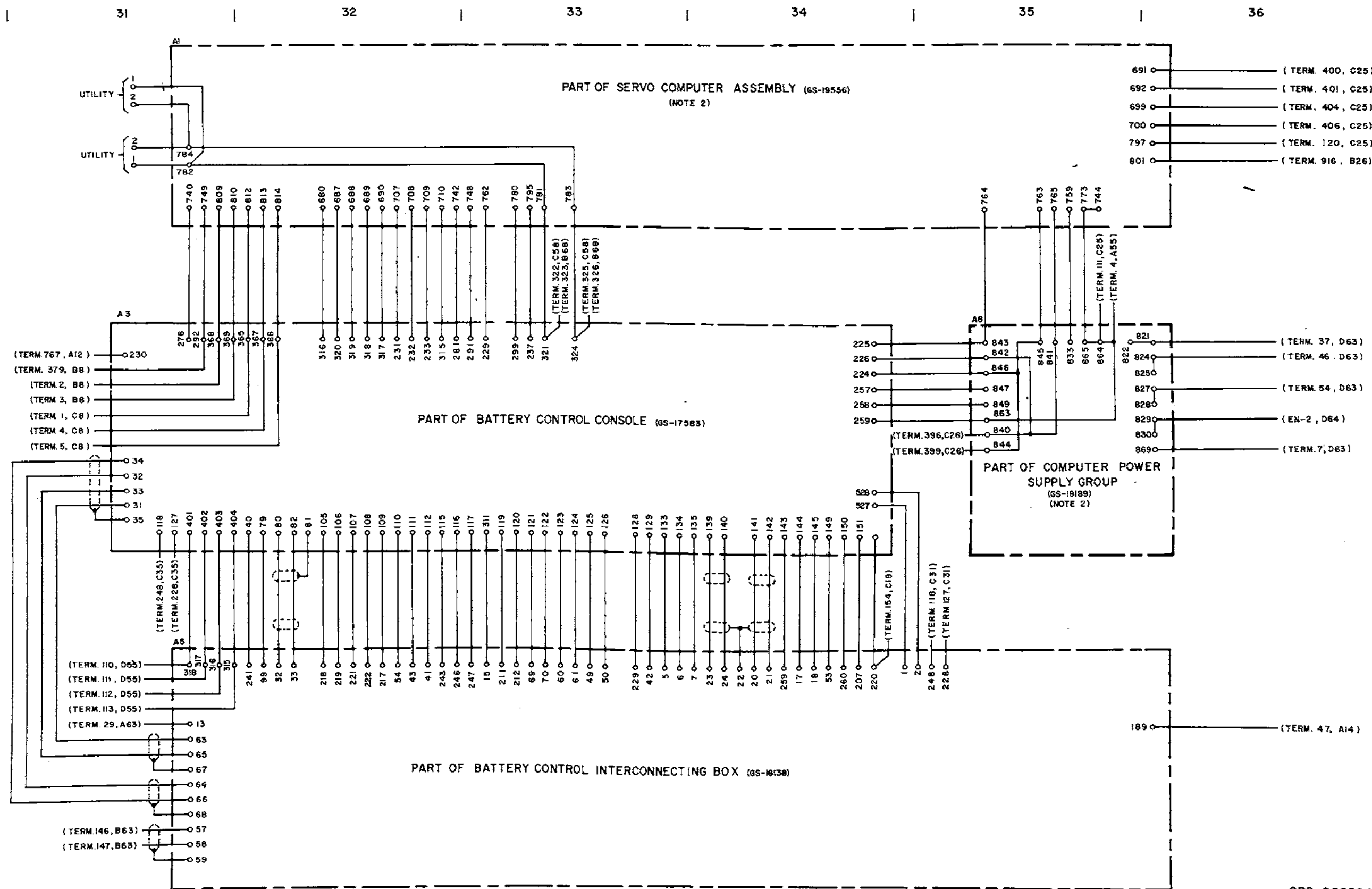


Figure 2.1 (U). Continued (sheet 5 of 18).

**CONFIDENTIAL**



**Figure 2.1 (U).** Continued (sheet 6 of 18).

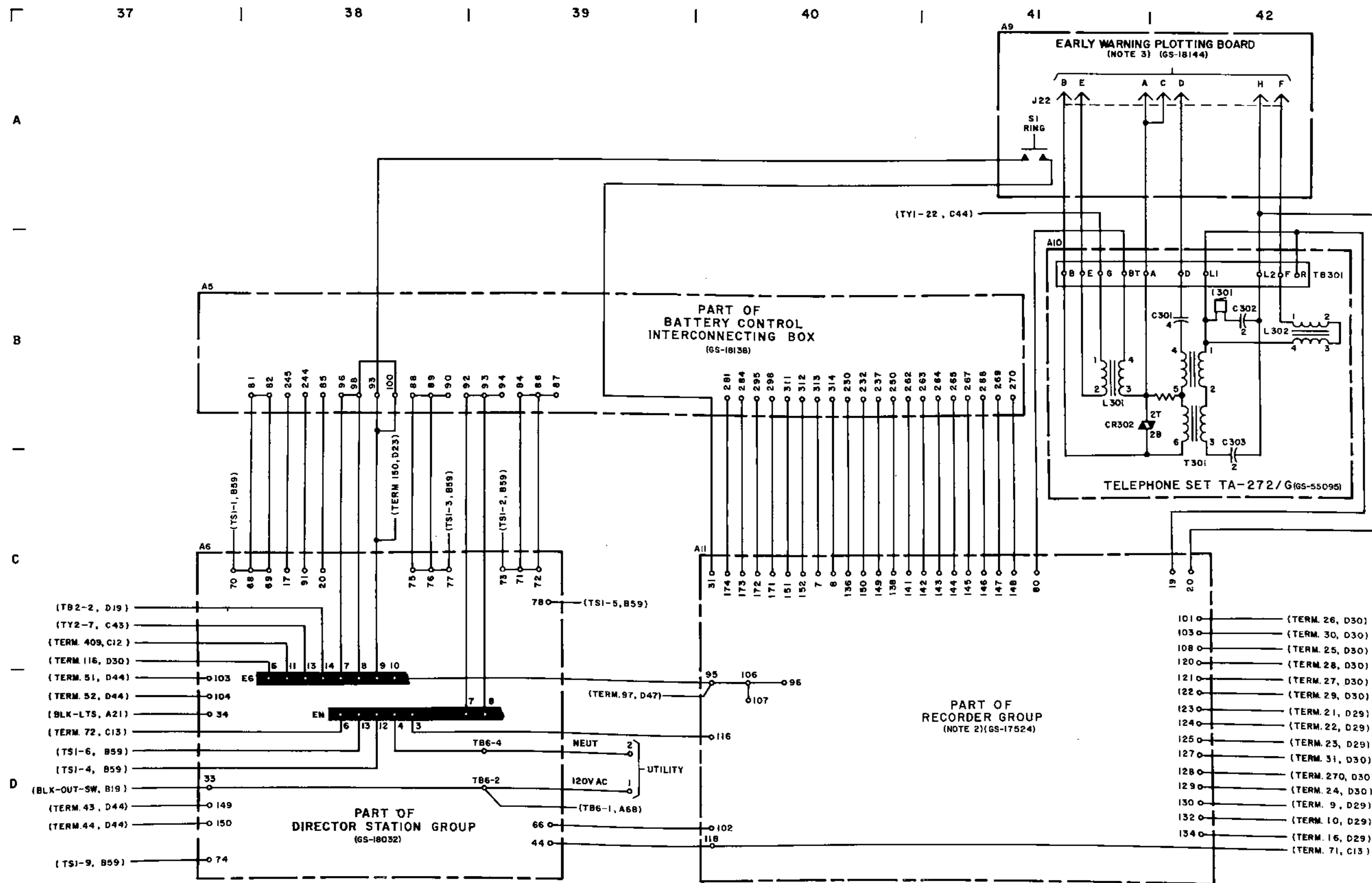


Figure 2.1 (U). Continued (sheet 7 of 18).

ORD G82585

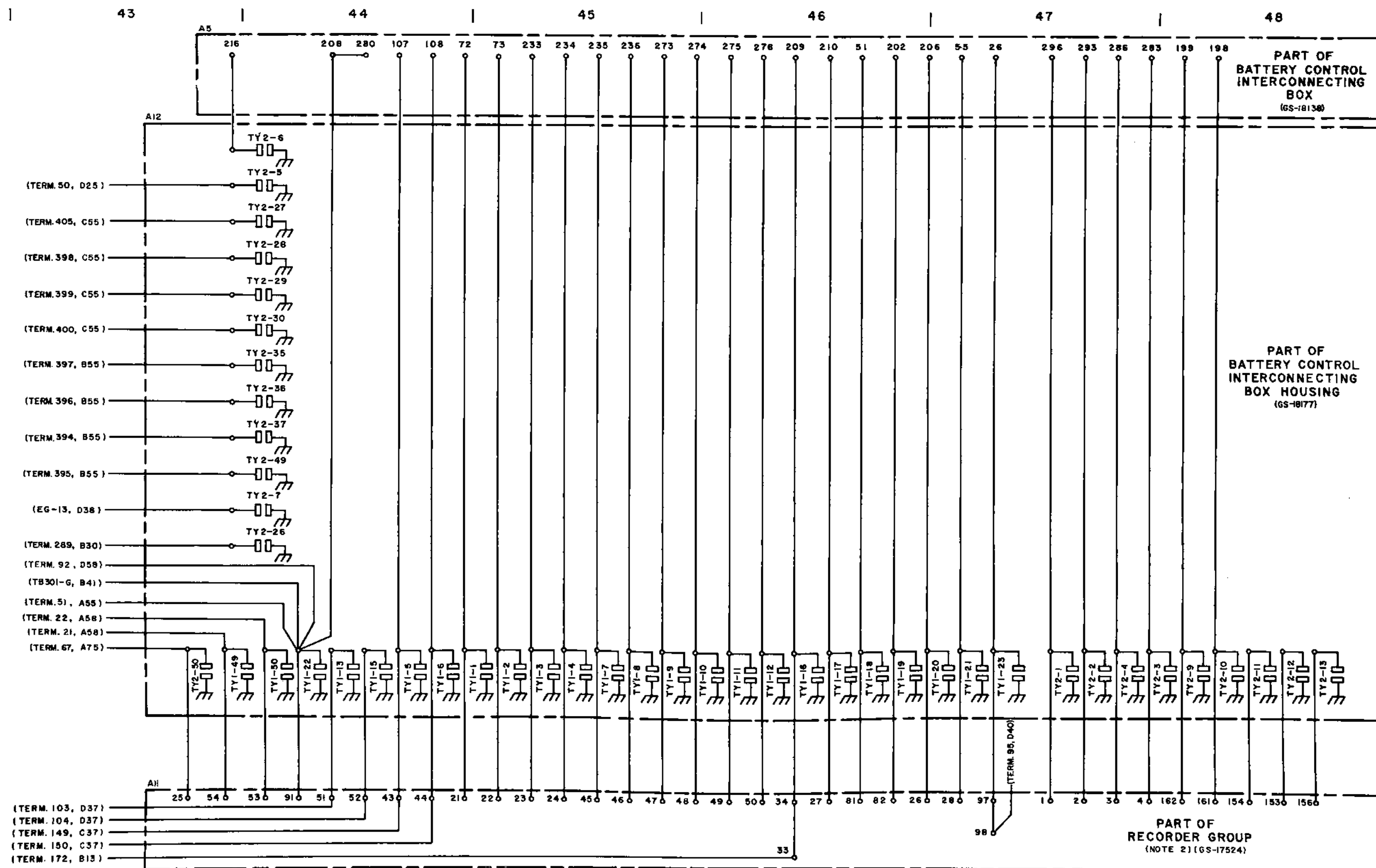


Figure 2.1 (U). Continued (sheet 8 of 18).

**CONFIDENTIAL**

ORD 682586



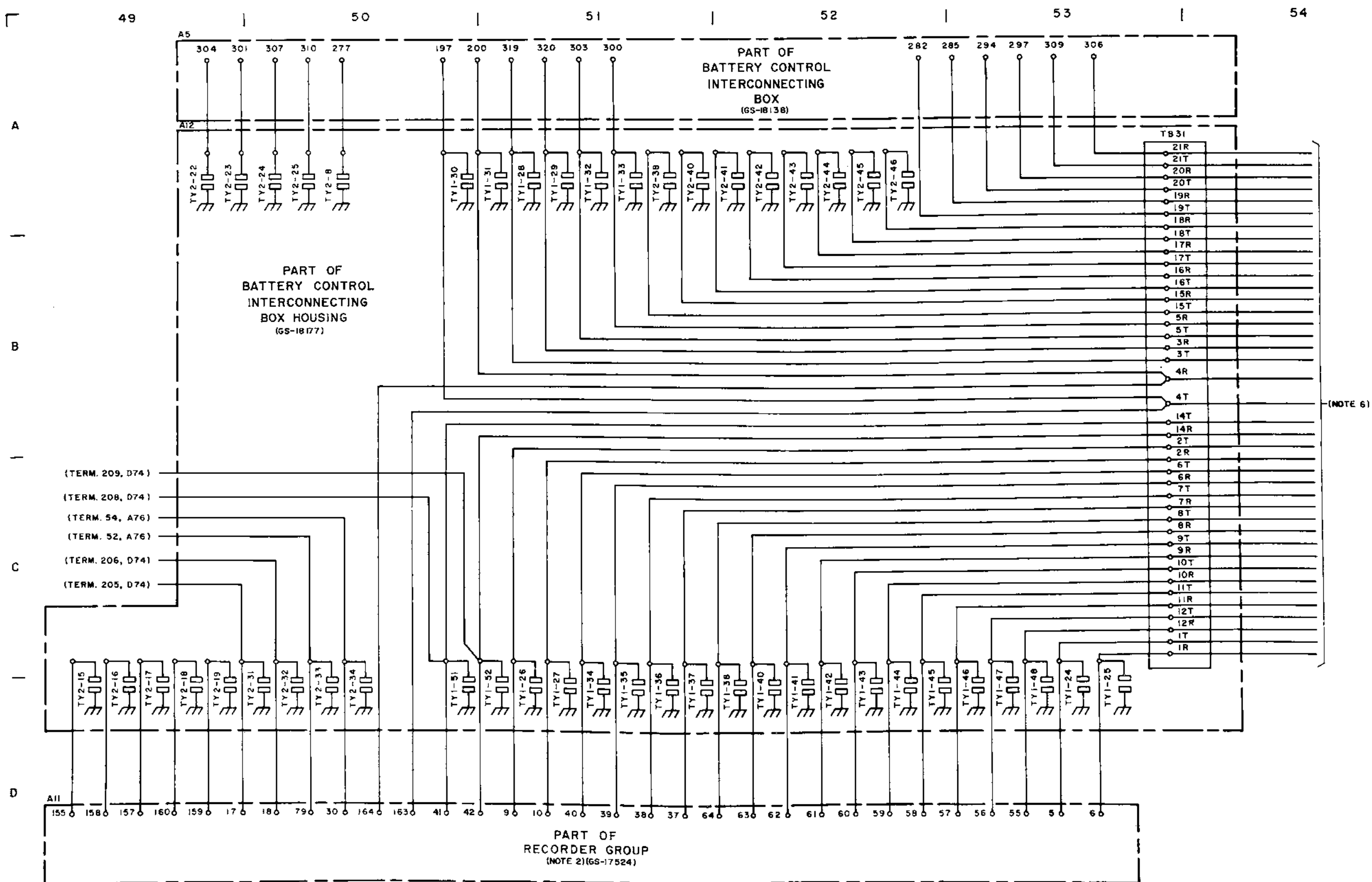


Figure 2.1 (U). Continued (sheet 9 of 18).

**CONFIDENTIAL**

ORD 682587

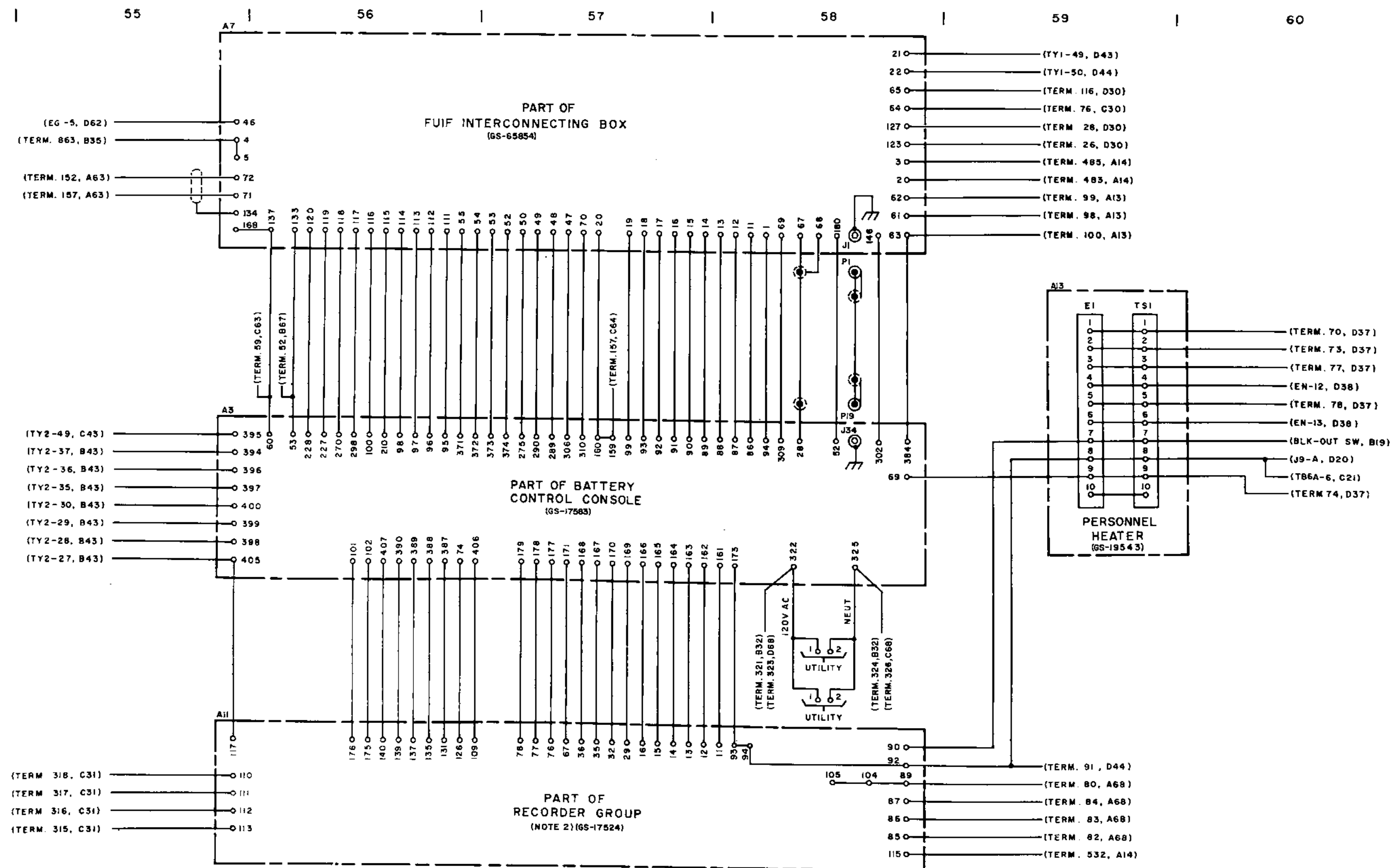


Figure 2.1 (U). Continued (sheet 10 of 18).

**CONFIDENTIAL**

ORD G82588

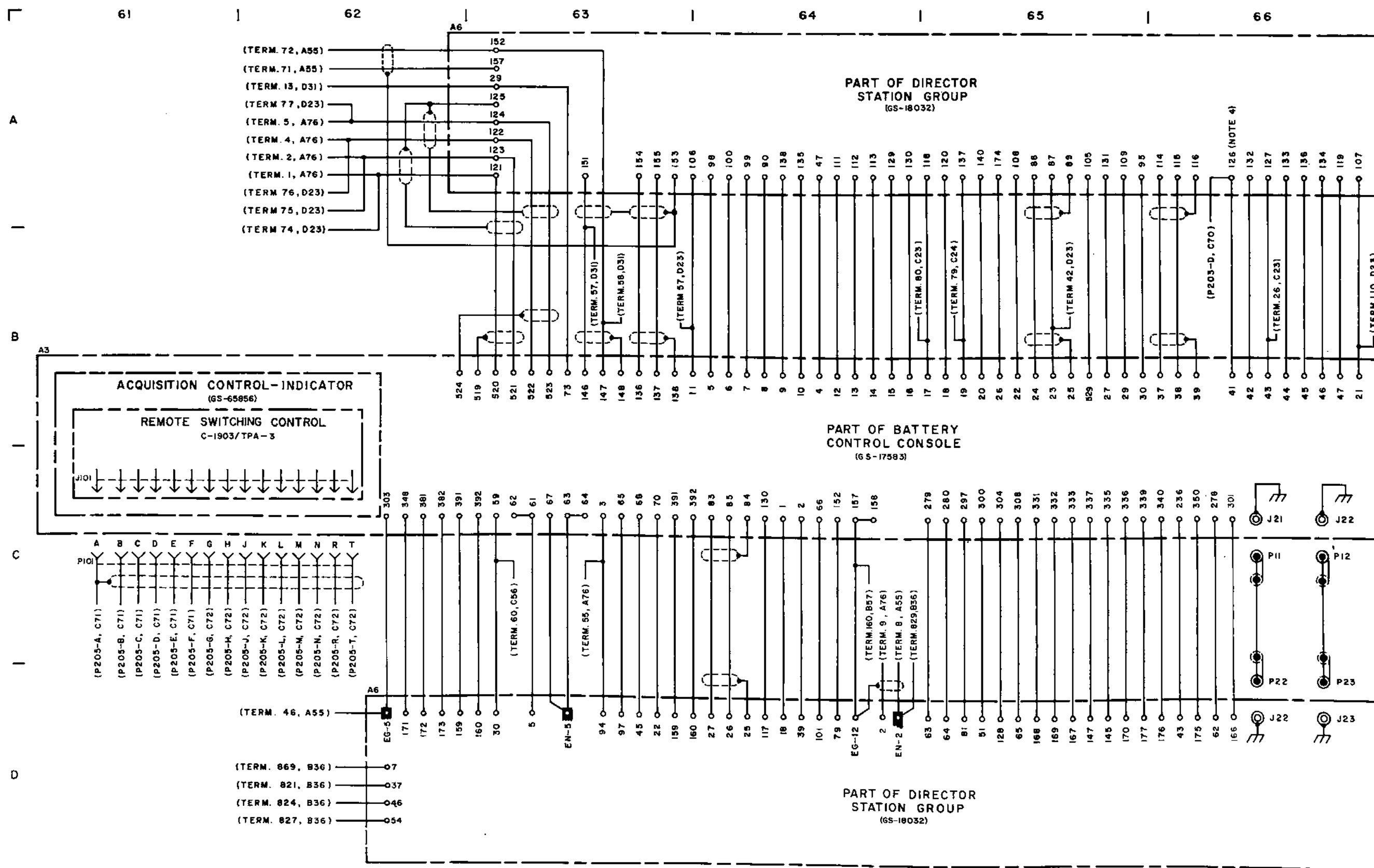


Figure 2.1 (U). Continued (sheet 11 of 18).

**CONFIDENTIAL**

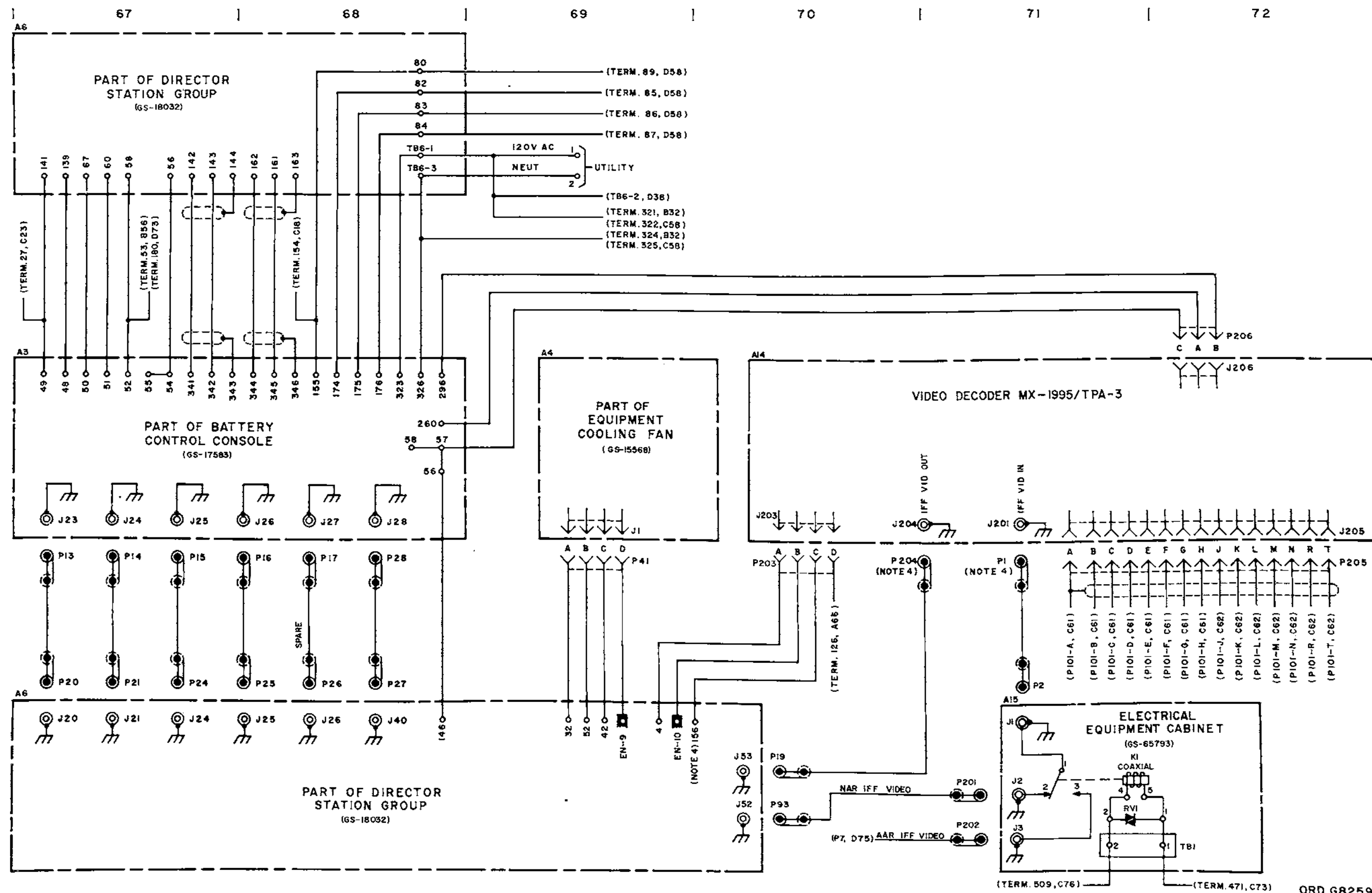
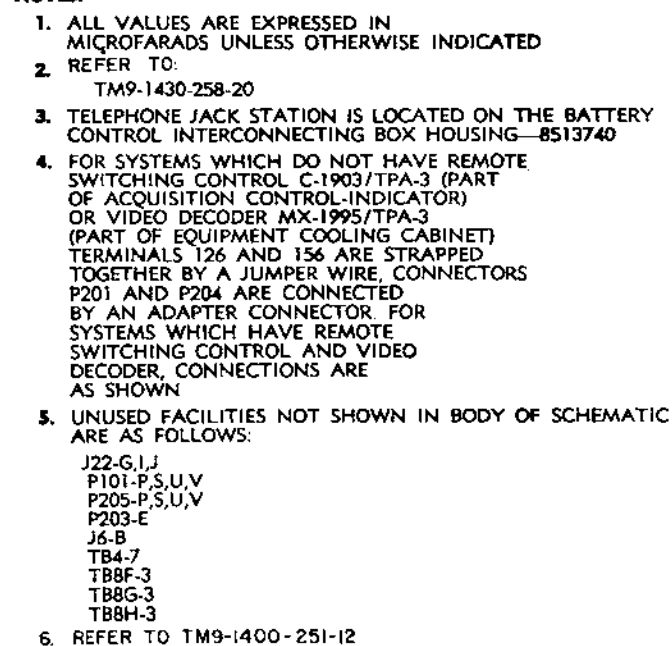


Figure 2.1 (U). Continued (sheet 12 of 18).

**CONFIDENTIAL**



ORD G82591



INDEX OF TERMINALS - COMPUTER AMPLIFIER-RELAY GROUP (FIG. 16\*)

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C8	55	C29	109	C30	163	C4	217	B2	271	B6	325	D17	379	B8	433	A15	487	D16	541	B10		
2	C8	56	C29	110	C30	164	C4	218	B2	272	B6	326	D17	380	C11	434	A15	488	D16	542	B10		
3	C8	57	C28	111	C25	165	C4	219	B2	273	B6	327	C9	381	B8	435	A15	489	D16	543	B10		
4	C8	58	C28	112	C25	166	C4	220	B2	274	D17	328	C9	382	B8	436	A15	490	D16	544	B10		
5	C8	59	C28	113	No Conn	167	C4	221	B3	275	B6	329	C9	383	B8	437	A15	491	No Conn	545	B10		
6	D17	60	C29	114	C2	168	C5	222	B3	276	No Conn	330	No Conn	384	B8	438	A16	492	No Conn	546	B10		
7	B11	61	C29	115	C25	169	C5	223	B3	277	No Conn	331	C9	385	B8	439	A16	493	B8	547	D16		
8	B11	62	C28	116	D30	170	C5	224	B3	278	B6	332	C9	386	B8	440	A16	494	No Conn	548	B10		
9	D29	63	C28	117	C25	171	C5	225	B3	279	B6	333	C9	387	B8	441	A16	495		549	B11		
10	D29	64	C28	118	C25	172	C5	226	B3	280	C28	334	C10	388	B8	442	A16	496		550	B11		
11	B11	65	C29	119	C25	173	C5	227	B3	281	B6	335	C10	389	B8	443	A16	497		551	C22		
12	B11	66	C28	120	C25	174	No Conn	228	B3	282	B6	336	C10	390	B11	444	A16	498	No Conn	552	C22		
13	C11	67	C29	121	C25	175	C5	229	B3	283	B6	337	C10	391	C9	445	A17	499	C30	553	C22		
14	C1	68	C29	122	C25	176	C5	230	B3	284	B6	338	C10	392	C11	446	A17	500	B8	554	C22		
15	C1	69	C29	123	C25	177	D17	231	D14	285	B4	339	No Conn	393	B11	447	A17	501	B8	555	C22		
16	D29	70	C29	124	C26	178	C5	232	B3	286	B4	340	C10	394	C26	448	A17	502	B9	556	C22		
17	A14	71	No Conn	125	C26	179	C5	233	D14	287	C8	341	C10	395	C26	449	A17	503	B9	557	C23		
18	D17	72	C29	126	C26	180	C5	234	D14	288	C8	342	C10	396	C26	450	A18	504	B9	558	C23		
19	D18	73	C29	127	C26	181	C5	235	B3	289	C8	343	C10	397	C26	451	A17	505	B9	559	C23		
20	C1	74	C29	128	C26	182	C5	236	B3	290	C8	344	C10	398	C26	452	A17	506	B9	560	C23		
21	D30	75	C28	129	C26	183	C5	237	B3	291	B11	345	C10	399	C26	453	A17	507	B9	561	C23		
22	D30	76	C30	130	C2	184	C5	238	B3	292	C8	346	C10	400	C25	454	D14	508	B9	562	C23		
23	D30	77	C27	131	C2	185	C6	239	B3	293	C8	347	C10	401	C25	455	A18	509	B9	563	D14		
24	D30	78	C27	132	C2	186	C6	240	B4	294	B11	348	No Conn	402	C26	456	A18	510	B9	564	D14		
25	D30	79	C27	133	C2	187	C6	241	B4	295	C10	349	C10	403	C26	457	A18	511	No Conn	565	D14		
26	D30	80	C28	134	C2	188	C6	242	B6	296	C8	350	C10	404	C25	458	A18	512	No Conn	566	D13		
27	D30	81	C28	135	C2	189	C6	243	B4	297	C8	351	C10	405	C25	459	A18	513	B9	567	D13		
28	D30	82	C27	136	C2	190	C6	244	B6	298	B11	352	D17	406	C25	460	A18	514	No Conn	568	D14		
29	D30	83	C27	137	C3	191	C6	245	B4	299	No Conn	353	C10	407	C25	461	D14	515	D17	569	D14		
30	D30	84	C27	138	C3	192	C6	246	B4	300	C8	354	C10	408	B11	462	D14	516	D17	570	D14		
31	D30	85	C28	139	C3	193	C6	247	B4	301	No Conn	355	C10	409	C30	463	D14	517	B9	571	No Conn		
32	C1	86	C28	140	C3	194	C6	248	B4	302	C8	356	C11	410	No Conn	464	D14	518	C26	572			
33	C1	87	C28	141	C3	195	C6	249	B4	303	C8	357	C11	411	A15	465	D15	519	B9	573			
34	C1	88	C28	142	C3	196	C6	250	B4	304	C9	358	C11	412	A15	466	D15	520	B9	574			
35	C1	89	C28	143	C3	197	B5	251	B4	305	C9	359	A18	413	A16	467	D15	521	B9	575			
36	C1	90	C28	144	C3	198	B5	252	B4	306	C8	360	No Conn	414	A16	468	D15	522	B9	576			
37	C1	91	C30	145	C3	199	B1	253	B4	307	C9	361	C11	415	A16	469	D15	523	B9	577			
38	C2	92	C30	146	C3	200	B1	254	B4	308	C9	362	C11	416	A17	470	D15	524	B11	578			
39	B11	93	C30	147	C3	201	B1	255	B5	309	No Conn	363	C11	417	A17	471	D15	525	B9	579			
40	B11	94	C30	148	C3	202	B1	256	B5	310	D17	364	No Conn	418	No Conn	472	D15	526	B9	580	No Conn		
41	C2	95	C30	149	C3	203	B1	257	B5	311	C9	365	No Conn	419	A15	473	D15	527	B9				
42	A18	96	C30	150	C3	204	B1	258	B5	312	C9	366	C11	420	A15	474	D15	528	B10				
43	C2	97	C28	151	C3	205	B1	259	B5	313	B8	367	C11	421	A16	475	D15	529	B10				
44	C2	98	A13	152	C3	206	B2	260	B5	314	B8	368	No Conn	422	A16	476	D15	530	B10				
45	A15	99	A13	153	C4	207	B2	261	B5	315	B8	369	No Conn	423	A16	477	D16	531	B10				
46	C2	100	A13	154	C4	208	B2	262	B1	316	B8	370	C29	424	A17	478	D16	532	A14				
47	A14	101	C29	155	C4	209	B2	263	B5	317	B8	371	C11	425	A17	479	D16	533	B10				
48	C27	102	C29	156	C4	210	B2	264	B1	318	B8	372	No Conn	426	D17	480	D16	534	B10				
49	A14	103	C2	157	C4	211	B2	265	B5	319	No Conn	373	C11	427	A14	481	D16	535	B10				
50	D25	104	C2	158	C4	212	B2	266	B5	320	C9	374	C11	428	A15	482	D16	536	B10				
51	C29	105	D17	159	C4	213	B2	267	B5	321	C9	375	B8	429	A15	483	A14	537	B10				
52	C29	106	D17	160	C4	214	B2	268	B5	322	No Conn	376	C11	430	No Conn	484	D16	538	B10				
53	C29	107	D18	161	C4	215	B2	269	B5	323	C9	377	C11	431	No Conn	485	A14	539	B10				
54	C29	108	C27	162	C4	216	B2	270	D30	324	C9	378	C11	432	A15	486	D16	540	B10				

Figure 2.1 (U). Continued (sheet 14 of 18).

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INDEX OF TERMINALS — SERVO COMPUTER ASSEMBLY (FIG. 2*)														INDEX OF TERMINALS — COMPUTER POWER SUPPLY GROUP (FIG. 49*)									
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
501	D2	555	D6	609	A3	663	A11	717	B9	771	D10	825	D3	879	D8	801	No Conn	855	No Conn	909	No Conn		
502	D2	556	D6	610	No Conn	664	A11	718	B8	772	B10	826	D10	880	D8	802	↑	856	No Conn	910	No Conn		
503	D2	557	D3	611	A4	665	A11	719	D9	773	A35	827	A1			803	↑	857	No Conn	911	B25		
504	D2	558	D6	612	A6	666	A11	720	D1	774	A35	828	D9			804	↑	858	B26	912	No Conn		
505	D2	559	D6	613	A4	667	A10	721	D10	775	A11	829	B9			805	↑	859	No Conn	913	No Conn		
506	D2	560	D6	614	A6	668	A10	722	D10	776	A11	830	B9			806	↑	860	No Conn	914	B26		
507	D3	561	D6	615	A4	669	B11	723	D10	777	D2	831	A6			807	↑	861	B25	915	B26		
508	D3	562	D6	616	A4	670	A11	724	D10	778	No Conn	832	A3			808	↑	862	B25	916	B26		
509	D3	563	D6	617	A4	671	D8	725	D10	779	D2	833	A2			809	↑	863	B35	917	B26		
510	D3	564	D6	618	A4	672	No Conn	726	D11	780	A33	834	A5			810	↑	864	B35	918	B26		
511	D3	565	D6	619	No Conn	673	D8	727	D11	781	A32	835	No Conn			811	↑	865	B35	919	No Conn		
512	D3	566	A2	620	D8	674	D8	728	D11	782	A31	836	A2			812	↑	866	No Conn	920	No Conn		
513	D3	567	B9	621	A4	675	D9	729	B9	783	A32	837	A1			813	↑	867	B25	921	No Conn		
514	D3	568	No Conn	622	A4	676	D9	730	A1	784	A31	838	A4			814	↑	868	B25	922	B26		
515	D3	569	No Conn	623	A4	677	D8	731	D11	785	No Conn	839	B9			815	↑	869	B36	923	No Conn		
516	D3	570	A4	624	A4	678	D9	732	D11	786	↑	840	D2			816	↑	870	No Conn	924	↑		
517	D3	571	D1	625	A5	679	D9	733	D11	787	↑	841	D2			817	↑	871	↑	925	↑		
518	D3	572	A1	626	A5	680	A32	734	A1	788	↑	842	B9			818	↑	872	↑	926	↑		
519	D10	573	A1	627	A5	681	B11	735	D2	789	↓	843	No Conn			819	↓	873	↓	927	↓		
520	D3	574	D2	628	A5	682	D9	736	D11	790	No Conn	844	No Conn			820	No Conn	874	↓	928	↓		
521	D3	575	A1	629	No Conn	683	D9	737	D11	791	D2	845	B8			821	B36	875	↓	929	↓		
522	D4	576	A1	630	No Conn	684	B11	738	D8	792	D11	846	No Conn			822	B35	876	↓	930	No Conn		
523	D4	577	A2	631	A5	685	D9	739	D8	793	B11	847	A2			823	No Conn	877	No Conn	931	B26		
524	A2	578	A2	632	A1	686	D9	740	A31	794	B11	848	D6			824	B36	878	B26	932	B26		
525	D4	579	A2	633	A5	687	A32	741	D11	795	A33	849	A4			825	B36	879	No Conn	933	B26		
526	D4	580	No Conn	634	A1	688	A32	742	A33	796	B8	850	B10			826	No Conn	880	↑	934	No Conn		
527	D4	581	A2	635	A5	689	A32	743	D11	797	A36	851	No Conn			827	B36	881	↑	935	B26		
528	D4	582	B9	636	A5	690	A32	744	D11	798	No Conn	852	↑			828	B36	882	↑	936	B26		
529	D4	583	B9	637	A5	691	A36	745	A8	799	D10	853	↑			829	B36	883	↑	937	B26		
530	D4	584	A2	638	A5	692	A36	746	D11	800	D10	854	No Conn			830	B36	884	↑	938	No Conn		
531	D4	585	D8	639	No Conn	693	D9	747	D11	801	A35	855	B10			831	B25	885	↑	939	No Conn		
532	D4	586	A2	640	No Conn	694	D9	748	A33	802	D1	856	No Conn			832	No Conn	886	↓	940	No Conn		
533	D4	587	A2	641	A6	695	D11	749	A31	803	A1	857	A6			833	B35	887	No Conn				
534	D4	588	A2	642	No Conn	696	B11	750	D11	804	D1	858	No Conn			834	B25	888	B26				
535	D4	589	A2	643	D4	697	D9	751	B8	805	D1	859	B10			835	No Conn	889	B26				
536	D4	590	No Conn	644	D5	698	D9	752	B8	806	D1	860	B10			836	No Conn	890	B26				
537	D4	591	A3	645	D8	699	A36	753	B8	807	D2	861	B10			837	B25	891	No Conn				
538	D5	592	A3	646	A5	700	A36	754	B8	808	B11	862	B10			838	No Conn	892	B25				
539	D5	593	A3	647	A5	701	D9	755	B8	809	A31	863	D10			839	B25	893	B25				
540	D5	594	A3	648	A6	702	D9	756	B8	810	A31	864	B9			840	B35	894	No Conn				
541	D5	595	A3	649	A6	703	D9	757	B8	811	B11	865	B9			841	B35	895	B25				
542	B9	596	A3	650	B9	704	D10	758	B8	812	A32	866	B10			842	B35	896	No Conn				
543	B9	597	A3	651	A6	705	D10	759	A35	813	A32	867	B10			843	B35	897	No Conn				
544	B9	598	A3	652	A6	706	D10	760	B11	814	A32	868	B10			844	B35	898	B26				
545	D5	599	A3	653	A6	707	A32	761	B11	815	B11	869	B9			845	B35	899	B25				
546	D5	600	D5	654	A6	708	A32	762	A33	816	D8	870	B10			846	B35	900	B25				
547	B10	601	B10	655	A6	709	A32	763	A35	817	A1	871	B9			847	B35	901	B26				
548	D5	602	B10	656	A8	710	A32	764	A35	818	D2	872	B10			848	No Conn	902	B25				
549	D5	603	B10	657	D8	711	D10	765	A35	819	A3	873	B10			849	B35	903	B25				
550	D5	604	B10	658	D8	712	D10	766	B11	820	A1	874	D1			850	No Conn	904	No Conn				
551	D5	605	A3	659	B9	713	D10	767	A33	821	A6	875	A8			851	B25	905	No Conn				
552	D5	606	A3	660	B10	714	D10	768	D10	822	B9	876	A8			852	No Conn	906	No Conn				
553	D5	607	A3	661	B11	715	D10	769	No Conn	823	B9	877	A8			853	B25	907	B25				
554	D5	608	A3	662	A11	716	No Conn	770	No Conn	824	D1	878	D8			854	No Conn	908	No Conn				

Figure 2.1 (U). Continued (sheet 15 of 18).

INDEX OF TERMINALS—BATTERY CONTROL INTERCONNECTING BOX												INDEX OF TERMINALS—BATTERY CONTROL INTERCONNECTING BOX HOUSING						INDEX OF TERMINALS—AUXILIARY ACQUISITION INTERCONNECTING BOX							
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C34	55	A47	109	No Conn	163	No Conn	217	C32	271	No Conn	TB31-1T	B53	TY1-13	D44	TY2-15	D49	1	B58	55	B56	109	No Conn	174	D74
2	C34	56	No Conn	110	No Conn	164		218	C32	272	No Conn	-1R	B53	-14	No Conn	-16	D49	2	A58	56	D23	110	D23	175	D74
3	No Conn	57	D31	111	No Conn	165		219	C32	273	A45	-2T	B53	-15	D44	-17	D49	3	A58	57	D23	111	B56	176	D74
4	No Conn	58	D31	112	B27	166		220	C34	274	A45	-2R	C53	-16	D46	-18	D49	4	A55	58	D22	112	B56	177	D74
5	C33	59	D31	113	B27	167		221	C32	275	A46	-3T	B53	-17	D46	-19	D49	5	A55	59	D22	113	B56	178	D74
6	C33	60	C33	114	No Conn	168		222	C32	276	A46	-3R	B53	-18	D46	-20	No Conn	6	C23	60	C23	114	B56	179	D74
7	C34	61	C33	115	B27	169		223	B28	277	A50	-4T	B53	-19	D46	-21	No Conn	7	No Conn	61	B58	115	B56	180	D73
8	No Conn	62	No Conn	116	B27	170		224	No Conn	278	No Conn	-4R	B53	-20	D47	-22	A49	8	C22	62	A58	116	B56	181	No Conn
9		63	D31	117	No Conn	171	No Conn	225	No Conn	279	No Conn	-5T	B53	-21	D47	-23	A49	9	C22	63	B58	117	B56	182	
10		64	D31	118	B28	172	B29	226	No Conn	280	A44	-5R	B53	-22	D44	-24	A50	10	C23	64	A58	118	B56	183	
11		65	D31	119	B28	173	B29	227	No Conn	281	B40	-6T	C53	-23	D47	-25	A50	11	B58	65	A58	119	B56	184	
12	No Conn	66	D31	120	No Conn	174	No Conn	228	C35	282	A52	-6R	C53	-24	D53	-26	C44	12	B58	66	C23	120	B56	185	
13	D31	67	D31	121	No Conn	175	B29	229	C33	283	A47	-7T	C53	-25	D53	-27	A44	13	B57	67	B58	121	No Conn	186	
14	No Conn	68	D31	122	B28	176	B29	230	B40	284	B40	-7R	C53	-26	D51	-28	B44	14	B57	68	B58	122	C23	187	
15	C34	69	C33	123	B28	177	No Conn	231	B30	285	A53	-8T	C53	-27	D51	-29	B44	15	B57	69	B58	123	A58	188	
16	No Conn	70	C33	124	B30	178		232	B40	286	A47	-8R	C53	-28	A51	-30	B44	16	B57	70	B57	124	D22	189	
17	C34	71	No Conn	125	B28	179		233	A45	287	B30	-9T	C53	-29	A51	-31	D49	17	B57	71	A55	125	No Conn	190	No Conn
18	C34	72	A44	126	B28	180	No Conn	234	A45	288	B30	-9R	C53	-30	A50	-32	D50	18	B57	72	A55	126	No Conn	191	D74
19	No Conn	73	A45	127	B28	181	B27	235	A45	289	B30	-10T	C53	-31	A50	-33	D50	19	B57	73	D22	127	A58	192	No Conn
20	C34	74	No Conn	128	B30	182	B27	236	A45	290	B30	-10R	C53	-32	A51	-34	D50	20	B57	74	D23	128	D22	193	D74
21	C34	75		129	B30	183	No Conn	237	B40	291	B30	-11T	C53	-33	A51	-35	B44	21	A58	75	D23	129	D22	194	D73
22	C34	76		130	B28	184		238	No Conn	292	B30	-11R	C53	-34	D51	-36	B44	22	A58	76	D24	130	D22	195	D73
23	C34	77		131	No Conn	185		239	No Conn	293	A47	-12T	C53	-35	D51	-37	C44	23	No Conn	77	D23	131	No Conn	196	D73
24	C34	78		132		186	No Conn	240	B27	294	A53	-12R	C53	-36	D51	-38	A51	24	No Conn	78	C22	132	No Conn	197	D73
25	No Conn	79		133		187	B29	241	C31	295	B40	-13T	No Conn	-37	D51	-39	No Conn	25	No Conn	79	C23	133	B56	198	D73
26	A47	80	No Conn	134		188	B29	242	No Conn	296	A47	-13R	No Conn	-38	D51	-40	A51	26	C23	80	C23	134	A55	199	No Conn
27	No Conn	81	B38	135		189	D36	243	C32	297	A53	-14T	C53	-39	No Conn	-41	A51	27	C23	81	No Conn	135	No Conn	200	D73
28		82	B38	136		190	B27	244	B38	298	B40	-14R	C53	-40	D52	-42	A52	28	No Conn	82		136	No Conn	201	D73
29		83	B38	137		191	B29	245	B38	299	No Conn	-15T	B53	-41	D52	-43	A52	29	No Conn	83		137	B56	202	D74
30		84	B39	138		192	B30	246	C32	300	A51	-15R	B53	-42	D52	-44	A52	30	No Conn	84		138	D22	203	D73
31	No Conn	85	B38	139		193	B30	247	C32	301	A49	-16T	B53	-43	D52	-45	A52	31	C23	85		139	No Conn	204	D73
32	C32	86	B39	140		194	B30	248	C35	302	No Conn	-16R	B53	-44	D52	-46	A52	32	C23	86		140	D22	205	D73
33	C32	87	B39	141	No Conn	195	No Conn	249	No Conn	303	A51	-17T	B53	-45	D52	-47	No Conn	33	C23	87		141	No Conn	206	D73
34	No Conn	88	B38	142	B28	196	No Conn	250	B40	304	A49	-17R	B53	-46	D52	-48	No Conn	34	C22	88		142		207	No Conn
35		89	B38	143	B28	197	A50	251	No Conn	305	No Conn	-18T	A53	-47	D53	-49	C44	35	C22	89		143		208	D74
36		90	B38	144	No Conn	198	A48	252	No Conn	306	A53	-18R	A53	-48	D53	-50	D43	36	C22	90		144		209	D74
37		91	No Conn	145	B28	199	A48	253	B27	307	A50	-19T	A53	-49	D43	-51	No Conn	37	C22	91		145	No Conn	210	No Conn
38		92	B38	146	B28	200	A50	254	No Conn	308	No Conn	-19R	A53	-50	D44	-52	No Conn	38	C22	92		146	B58		
39		93	B39	147	No Conn	201	No Conn	255	No Conn	309	A53	-20T	A53	-51	D53			39	C22	93		147	No Conn		
40	No Conn	94	B29	148	B28	202	A46	256	B27	310	A50	-20R	A53	-52	D53			40	C22	94		148	No Conn		
41	C32	95	B27	149	B29	203	No Conn	257	No Conn	311	B40	-21T	A53	TY2-1	D47			41	C22	95		149	No Conn		
42	C33	96	B38	150	No Conn	204	C21	258	No Conn	312	B40	-21R	A53	-2	D47			42	D23	96		150	D23		
43	C32	97	B27	151	No Conn	205	No Conn	259	C34	313	B40	TY1-1	D44	-3	D47			43	D23	97		162	No Conn		
44	No Conn	98	B38	152	B29	206	A46	260	C34	314	B40	-2	D45	-4	D47			44	No Conn	98		163			
45		99	C32	153	B29	207	C34	261	No Conn	315	C31	-3	D45	-5	A44			45	D23	99		164			
46		100	B18	154	B29	208	A44	262	B40	316	C31	-4	D45	-6	A44			46	A55	100		165			
47		101	No Conn	155	B29	209	A46	263	B40	317	C31	-5	D44	-7	C44			47	B57	101		166			
48	No Conn	102		156	B29	210	A46	264	B41	318	C31	-6	D44	-8	A50			48	B57	102	No Conn	167	No Conn		
49	C33	103		157	B29	211	C33	265	B41	319	A51	-7	D45	-9	D48			49	B57	103	D23	168	B55		
50	C33	104		158	B30	212	C33	266	No Conn	320	A51	-8	D45	-10	D48			50	B57	104	No Conn	169	D75		
51	A46	105		159	B30	213	No Conn	267	B41			-9	D45	-11	D48			51	No Conn	105	No Conn	170	D73		
52	No Conn	106	No Conn	160	B29	214	C21	268	B41			-10	D46	-12	D48			52	B57	106	No Conn	171	D74		
53	C34	107	A44	161	B30	215	No Conn	269	B41			-11	D46	-13	D48			53	B57	107	No Conn	172	D74		
54	C32	108	A44	162	A43	216	A43	270	B41			-12	D46	-14	No Conn			54	B56	108	D23	173	D74		

Figure 2.1 (U). Continued (sheet 16 of 18).

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**INDEX OF TERMINALS - BATTERY CONTROL CONSOLE (WITH AAR)**

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C64	55	B67	109	C32	163	C57	217	B16	271	C16	325	C58	379	C17	471	C73	525	B75
2	C64	56	C68	110	C32	164	C57	218	B17	272	C16	326	B68	380	C17	472	C74	526	B75
3	C64	57	C68	111	C32	165	C57	219	B17	273	C16	327	No Conn	381	C62	473	B73	527	C34
4	B64	58	C68	112	C32	166	C57	220	B15	274	C16	328	↑	382	C62	474	B73	528	C34
5	B64	59	C63	113	B14	167	C57	221	B17	275	B57	329	↓	383	C18	475	B73	529	B65
6	B64	60	B56	114	B14	168	C57	222	B17	276	B31	330	No Conn	384	B58	476	B73	530	No Conn
7	B64	61	C63	115	C32	169	C57	223	B17	277	C16	331	C65	385	C18	477	B73	531	↑
8	B64	62	C63	116	C32	170	C57	224	B34	278	C66	332	C65	386	C18	478	C74	532	↑
9	B64	63	C63	117	C33	171	C57	225	B34	279	C65	333	C65	387	C66	479	C74	533	↑
10	B64	64	C63	118	C31	172	B13	226	B34	280	C65	334	No Conn	388	C56	480	B73	534	↑
11	B64	65	C63	119	C33	173	C58	227	B56	281	B32	335	C65	389	C56	481	B73	535	↑
12	B64	66	C64	120	C33	174	B68	228	B56	282	B14	336	C65	390	C56	482	B73	536	↑
13	B64	67	C63	121	C33	175	B68	229	B33	283	C16	337	C65	391	C63	483	B73	537	↑
14	B64	68	C63	122	C33	176	B68	230	B31	284	No Conn	338	No Conn	392	C63	484	No Conn	538	↑
15	B64	69	B58	123	C33	177	C57	231	B32	285	C16	339	C65	393	No Conn	485	B74	539	↑
16	B64	70	C63	124	C33	178	C57	232	B32	286	C16	340	C66	394	B55	486	B74	540	No Conn
17	B65	71	C13	125	C33	179	C57	233	B32	287	C16	341	B67	395	B55	487	B74		
18	B65	72	C13	126	C33	180	B18	234	C14	288	C16	342	B67	396	B55	488	B74		
19	B65	73	B63	127	C31	181	B15	235	B14	289	B57	343	B67	397	B55	489	B74		
20	B65	74	C56	128	C33	182	B15	236	C66	290	B57	344	B68	398	C55	490	B74		
21	B66	75	C18	129	C33	183	B16	237	B33	291	B33	345	B68	399	C55	491	B74		
22	B65	76	C13	130	C64	184	B16	238	C14	292	B31	346	B68	400	C55	492	B74		
23	B65	77	C18	131	B14	185	B17	239	C14	293	C16	347	No Conn	401	C31	493	B74		
24	B65	78	C13	132	No Conn	186	B16	240	C14	294	No Conn	348	C62	402	C31	494	B74		
25	B65	79	C32	133	C33	187	B17	241	B18	295	D24	349	No Conn	403	C31	495	B74		
26	B65	80	C32	134	C33	188	B18	242	B18	296	B68	350	C66	404	C31	496	B74		
27	B65	81	C32	135	C34	189	B18	243	B18	297	C65	351	No Conn	405	C55	497	B74		
28	B58	82	C32	136	B63	190	C18	244	B18	298	B56	352	↑	406	C56	498	B75		
29	B65	83	C64	137	B63	191	B15	245	B18	299	B33	353	↓	407	C56	499	B75		
30	B65	84	C64	138	B63	192	B15	246	B18	300	C65	354	↓	408	No Conn	500	B75		
31	C31	85	C64	139	C34	193	B16	247	C14	301	C66	355	↓	409	No Conn	501	B75		
32	C31	86	B58	140	C34	194	B16	248	C14	302	B58	356	No Conn	410	No Conn	502	B75		
33	C31	87	B58	141	C34	195	B17	249	C14	303	C62	357	C17			503	B75		
34	C31	88	B58	142	C34	196	B16	250	C15	304	C65	358	B13			504	B75		
35	C31	89	B57	143	C34	197	B17	251	C15	305	D24	359	C17	451	C14	505	B75		
36	No Conn	90	B57	144	C34	198	B14	252	C15	306	B57	360	C17	452	C13	506	B75		
37	B66	91	B57	145	C34	199	B15	253	C15	307	C24	361	C17	453	C13	507	B75		
38	B66	92	B57	146	B63	200	B15	254	C15	308	C65	362	C17	454	C14	508	No Conn		
39	B66	93	B57	147	B63	201	B15	255	C13	309	B58	363	C17	455	C14	509	C75		
40	C31	94	B58	148	B63	202	B15	256	B13	310	B57	364	C17	456	C14	510	C74		
41	B66	95	B56	149	C34	203	B15	257	B34	311	C33	365	B32	457	C14	511	C74		
42	B66	96	B56	150	C34	204	B15	258	B34	312	No Conn	366	B32	458	C14	512	C74		
43	B66	97	B56	151	C34	205	B15	259	B34	313	No Conn	367	B32	459	No Conn	513	C74		
44	B66	98	B56	152	C64	206	B15	260	B68	314	No Conn	368	B31	460	No Conn	514	C74		
45	B66	99	B57	153	C34	207	B16	261	C15	315	B32	369	B31	461	C74	515	C74		
46	B66	100	B56	154	B18	208	B16	262	C15	316	B32	370	No Conn	462	C73	516	C74		
47	B66	101	C56	155	B68	209	B16	263	C15	317	B32	371	B56	463	C73	517	C74		
48	B67	102	C56	156	C18	210	B56	264	C15	318	B32	372	B56	464	C73	518	C74		
49	B67	103	B14	157	C64	211	B16	265	C15	319	B32	373	B57	465	C73	519	B63		
50	B67	104	No Conn	158	C64	212	B16	266	C15	320	B32	374	B57	466	C73	520	B63		
51	B67	105	C32	159	B57	213	B16	267	C15	321	B32	375	C17	467	C73	521	B63		
52	B67	106	C32	160	B57	214	B17	268	C16	322	C58	376	C17	468	C73	522	B63		
53	B56	107	C32	161	C58	215	B17	269	C16	323	B68	377	C17	469	No Conn	523	B63		
54	B67	108	C32	162	C57	216	B17	270	B56	324	B32	378	C17	470	C73	524	B62		

Figure 2.1 (U). Continued (sheet 17 of 18).

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INDEX OF TERMINALS—RECORDER GROUP (FIG. 59*)								INDEX OF TERMINALS—DIRECTOR STATION GROUP (WITH AAR)								INDEX OF TERMINALS—UTILITY CABINET				INDEX OF TERMINALS—AUXILIARY ACQUISITION INTERCONNECTING BOX COVER			
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	D47	55	D53	109	D56	163	D50	1	No Conn	55	No Conn	109	A65	163	A68	TB2-1	D19			1	A75	55	A76
2	D47	56	D53	110	D55	164	D50	2	D64	56	A67	110	No Conn	164	No Conn	TB2-2	D19			2	A76	56	A76
3	D47	57	D52	111	D55	165	No Conn	3	No Conn	57	No Conn	111	A64	165	D22					3	A76	57	A77
4	D47	58	D52	112	D55	166	↑	4	D69	58	A67	112	A64	166	D66					4	A76	58	A78
5	D50	59	D52	113	D55	167	↑	5	D63	59	No Conn	113	A64	167	D65					5	A76	59	No Conn
6	D51	60	D52	114	No Conn	168	↓	6	D22	60	A67	114	A66	168	D65					6	A76	60	No Conn
7	C40	61	D52	115	D58	169	↓	7	D62	61	No Conn	115	A66	169	D65					7	No Conn	61	No Conn
8	C40	62	D52	116	D40	170	No Conn	8	No Conn	62	D66	116	A66	170	D65					8	A76	62	A76
9	D51	63	D52	117	D55	171	C40	9	↑	63	D65	117	D64	171	D62					9	A76	63	A74
10	D51	64	D51	118	D40	172	C40	10	↑	64	D65	118	D64	172	D62					10	A76	64	No Conn
11	D58	65	No Conn	119	No Conn	173	C40	11	↑	65	D65	119	A66	173	D62					11	A73	65	No Conn
12	D58	66	No Conn	120	C42	174	C40	12	↑	66	D39	120	A65	174	A65					12	A73	66	A74
13	D57	67	D57	121	C42	175	D56	13	↑	67	A67	121	A63	175	D66					13	A73	67	A75
14	D57	68	No Conn	122	D42	176	D56	14	↑	68	C38	122	A63	176	D66					14	A73	68	No Conn
15	D57	69	↑	123	D42	177	No Conn	15	↓	69	C38	123	A63	177	D65					15	A73	69	No Conn
16	D57	70	↑	124	D42	178	↑	16	No Conn	70	C37	124	A63							16	A73	70	No Conn
17	D49	71	↑	125	D42	179	↑	17	C38	71	C39	125	A63							17	A73	71	A75
18	D50	72	↑	126	D56	180	↑	18	D64	72	C39	126	A66							18	No Conn	72	No Conn
19	C42	73	↑	127	D42	181	↑	19	No Conn	73	C39	127	A66							19	No Conn	73	↑
20	C42	74	↑	128	D42	182	↑	20	C38	74	D37	128	D65							20	No Conn	74	↑
21	D44	75	No Conn	129	D42	183	↑	21	No Conn	75	C38	129	A64							21	A75	75	↑
22	D45	76	D57	130	D42	184	↑	22	D63	76	C38	130	A64	EG-1	No Conn					22	A75	76	↑
23	D45	77	D57	131	D56	185	↑	23	No Conn	77	C38	131	A65	-2	↑					23	A75	77	↑
24	D45	78	D57	132	D42	186	↑	24	No Conn	78	C39	132	A66	-3	↑					24	A75	78	↑
25	D43	79	D50	133	No Conn	187	↑	25	D64	79	D64	133	A66	-4	No Conn					25	A75	79	↑
26	D46	80	C41	134	D42	188	↑	26	D64	80	A68	134	A66	-5	D62					26	A74	80	No Conn
27	D46	81	D46	135	D56	189	↑	27	D64	81	D65	135	A64	-6	D37					27	A74		
28	D47	82	D46	136	C40	190	↑	28	No Conn	82	A68	136	A66	-7	D38					28	A73		
29	D57	83	No Conn	137	D56	191	↑	29	A63	83	A68	137	A67	-8	D38					29	A75		
30	D50	84	No Conn	138	C40	192	↑	30	D63	84	A68	138	A64	-9	D38					30	A75		
31	C40	85	D58	139	D56	193	↑	31	No Conn	85	D22	139	A67	-10	D38					31	A74		
32	D57	86	D58	140	D56	194	↑	32	D69	86	No Conn	140	A65	-11	D38					32	A74		
33	D46	87	D58	141	C40	195	↑	33	D37	87	A65	141	A67	-12	D64					33	A74		
34	D46	88	No Conn	142	C40	196	↑	34	D37	88	A65	142	A67	-13	D38					34	A74		
35	D57	89	D58	143	C41	197	↑	35	No Conn	89	A65	143	A67	-14	D38					35	No Conn		
36	D57	90	D58	144	C41	198	↑	36	No Conn	90	A64	144	A67	-14	No Conn					36	A74		
37	D51	91	D44	145	C41	199	↓	37	D62	91	C38	145	D65							37	A75		
38	D51	92	D58	146	C41	200	No Conn	38	No Conn	92	D22	146	D68	EN-1	No Conn					38	No Conn		
39	D51	93	D57	147	C41			39	D64	93	D22	147	D65	-2	D64					39	No Conn		
40	D51	94	D57	148	C41			40	No Conn	94	D63	148	No Conn	-3	D38					40	No Conn		
41	D50	95	D39	149	C40			41	No Conn	95	A65	149	D37	-4	D38					41	A75		
42	D51	96	D40	150	C40			42	D69	96	No Conn	150	D37	-5	D63					42	A75		
43	D44	97	D47	151	C40			43	D66	97	D63	151	A63	-6	D38					43	A75		
44	D44	98	D47	152	C40			44	D39	98	A64	152	A63	-7	D39					44	A73		
45	D45	99	No Conn	153	D48			45	D63	99	A64	153	A63	-8	D39					45	A74		
46	D45	100	No Conn	154	D48			46	D62	100	A64	154	A63	-9	D69					46	A74		
47	D45	101	C42	155	D49			47	A64	101	D64	155	A63	-10	D69					47	No Conn		
48	D45	102	D40	156	D48			48	No Conn	102	No Conn	156	D69	-11	No Conn					48	No Conn		
49	D46	103	C42	157	D49			49	No Conn	103	D37	157	A63	-12	D38					49	No Conn		
50	D46	104	D58	158	D49			50	No Conn	104	D37	158	D23	-13	D38					50	No Conn		
51	D44	105	D58	159	D49			51	D65	105	A65	159	D62	-14	D22					51	A76		
52	D44	106	D40	160	D49			52	D69	106	A64	160	D62	-15	No Conn					52	A76		
53	D44	107	D40	161	D48			53	No Conn	107	A66	161	A68							53	A74		
54	D43	108	C42	162	D48			54	D62	108	A65	162	A68							54	A76		

Figure 2.1 (U). Continued (sheet 18 of 18).

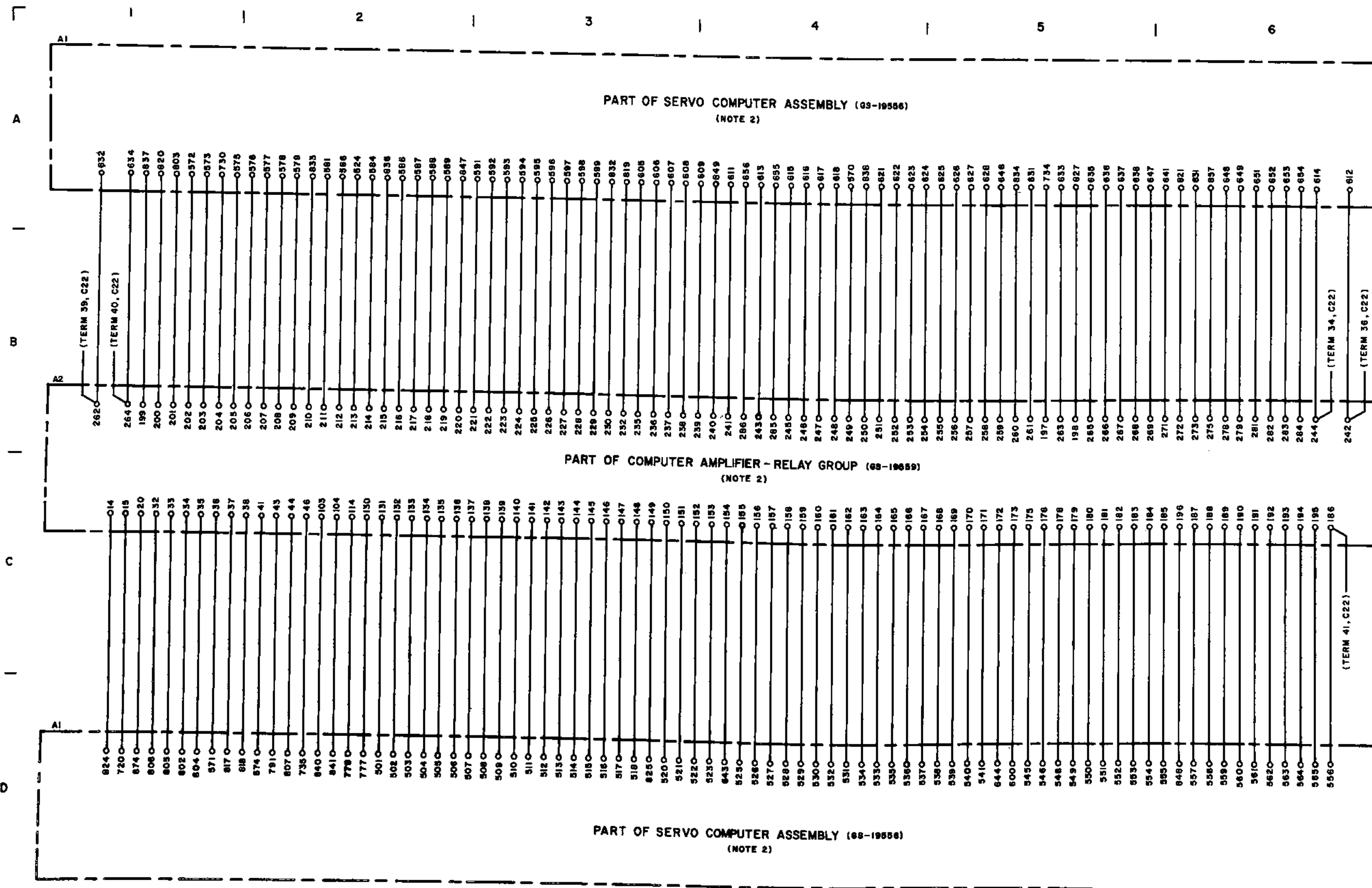


(U) Trailer Mounted Director Station 9985689—Apparatus List

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
A1					9000324	GS-19556
A2					9000326	GS-19559
A3					8173147	GS-17583
A4					8010350	GS-15568
A5					8512908	GS-18138
A6					8513626	GS-18032
A7					9985602	GS-65854
A8					8517797	GS-18189
A9					8512882	GS-18144
A10					8010134	GS-55095
C301	4	10		600	7593727	
C302	2	10		600	7593726	
C303	2	10		600	7593726	
CR302					8024363	
I301					7653456	
L301					8007179	
L302					8007179	
T301					8007193	
TB301					8175113	
A11					8019167	GS-17524
A12					8513740	GS-18177
TB31					8008374	
TY1					8008998	
TY2					8008998	
A13					9005301	GS-19543
A14					MX-1995/ TPA-3	Video decoder
A15					9985626	GS-65793
A16					9985622	GS-65857
I2D					572994	
I9A-1			25	120	8330088	
I9A-2			6	120	8328090	
I9B-1			25	120	8330088	
I9B-2			6	120	8328090	
I9C-1			25	120	8330088	
I9C-2			6	120	8328090	
I9D-1			25	120	8330088	
I9D-2			6	120	8328090	
I9E-1			25	120	8330088	
I9E-2			6	120	8328090	
I9F-1			25	120	8330088	
I9F-2			6	120	8328090	
I10A-1			6	120	8338088	
I10A-2					193048	
I10B-1			6	120	8338088	
I10B-2					193048	
I11A			8		8331295	
I11B			8		8331295	
I11C			8		8331295	
I11D			8		8331295	
I11E			8		8331295	
J9					7720490	
J22					8175623	
P1					MS35170	
P5					9144413	

(U) Trailer Mounted Director Station 9985689—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
P6					9144413	
P7					MS35170	
P8					MS35170	
P9					MS35170	
P10					MS35170	
P11					MS35170	
P12					MS35170	
P13					MS35170	
P14					MS35170	
P15					MS35170	
P16					MS35170	
P17					MS35170	
P19					MS35170	
P20					MS35170	
P21					MS35170	
P22					MS35170	
P23					MS35170	
P24					MS35170	
P25					MS35170	
P26					MS35170	
P27					MS35170	
P28					MS35170	
P29					9144413	
P31					MS35170	
P32					MS35170	
P33					MS35170	
P34					9144413	
P41					8019387	
P93					MS35170	
P101					MS3106A22-14S	
P201					MS35170	
P202					MS35170	
P203					MS3106A14-5S	
P204					MS35170	
P205					MS3106A22-14P	
P206					MS3106A14S-7P	
S1					7602615	
S4					MS35100-3	
S5				125	8019910	
S6					502688	
S9					MS35059-17	
TB4					7619754	
TB6A					8219431	
TB7A					8219432	
TB8A					8219433	
TB8B					8219433	
TB8C					8219433	
TB8D					8219433	
TB8E					8219433	
TB8F					8219433	
TB9G					8219433	
TB8H					8219433	
TB9A					8019335	
TB9B					8019335	



**Figure 2.2 (U).** *Trailer mounted director station 9988601—schematic diagram (sheet 1 of 17).*

ORD G82871

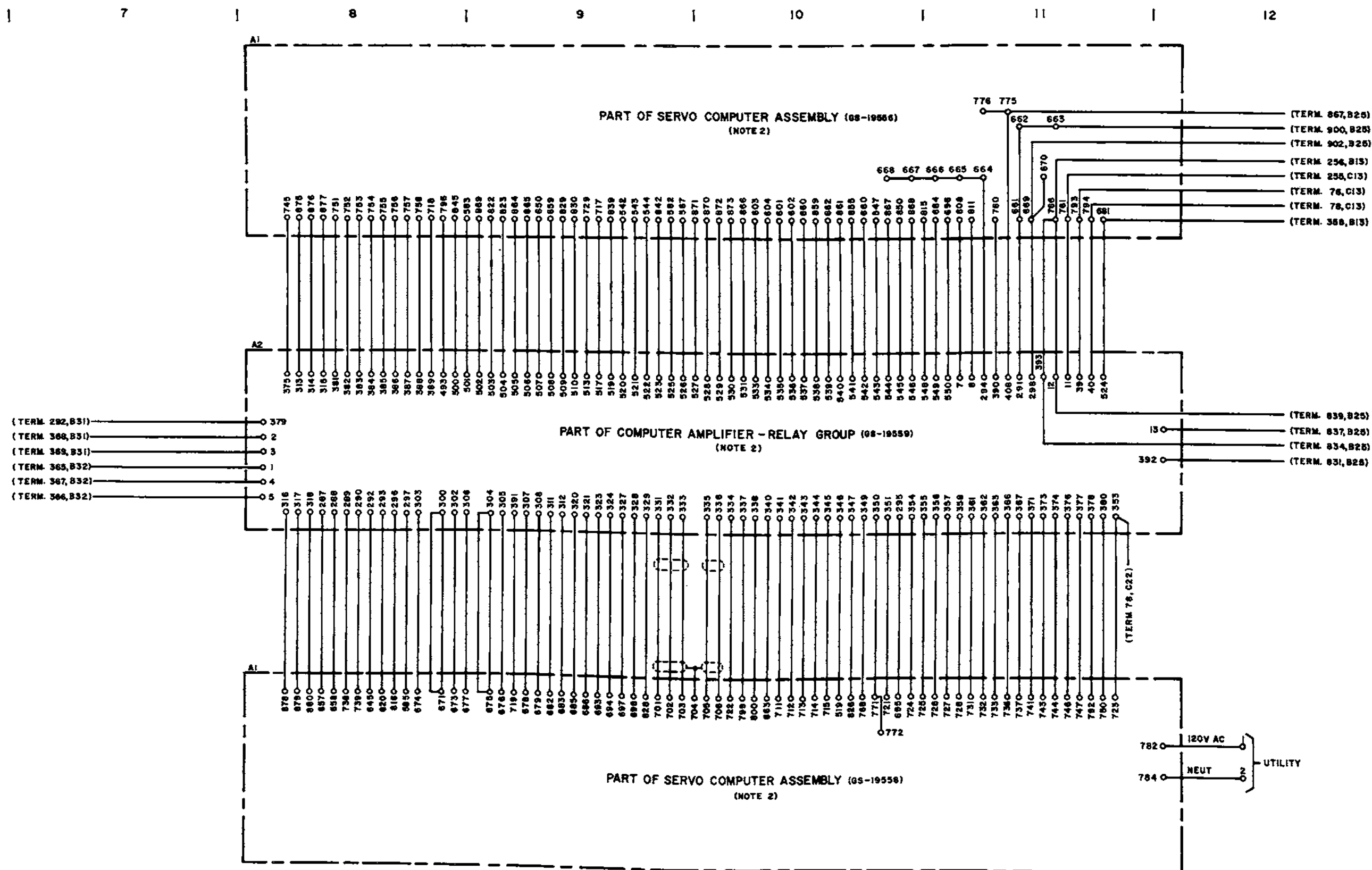
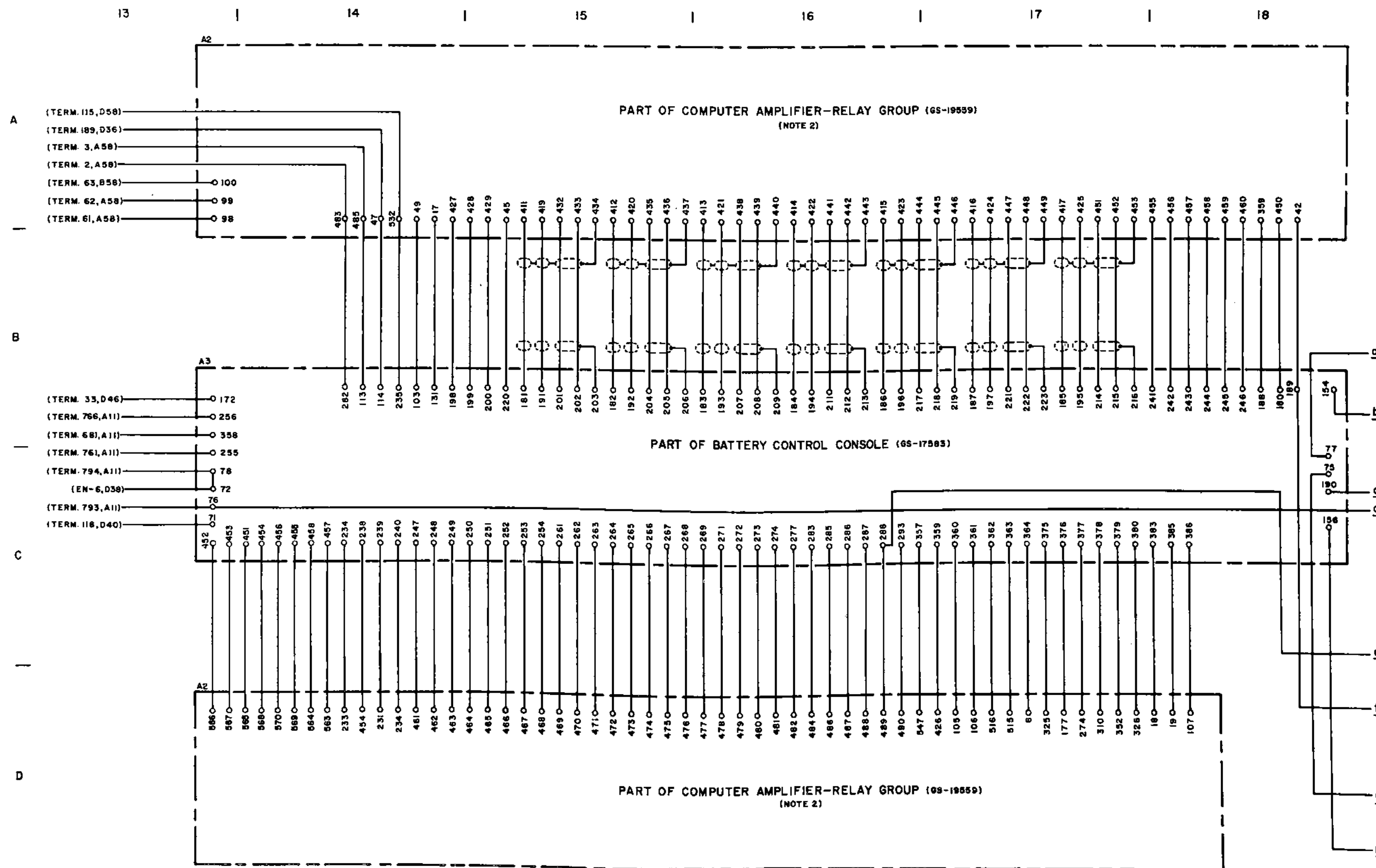


Figure 2.2 (U). Continued (sheet 2 of 17).

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Figure 2.2 (U). Continued (sheet 3 of 17).

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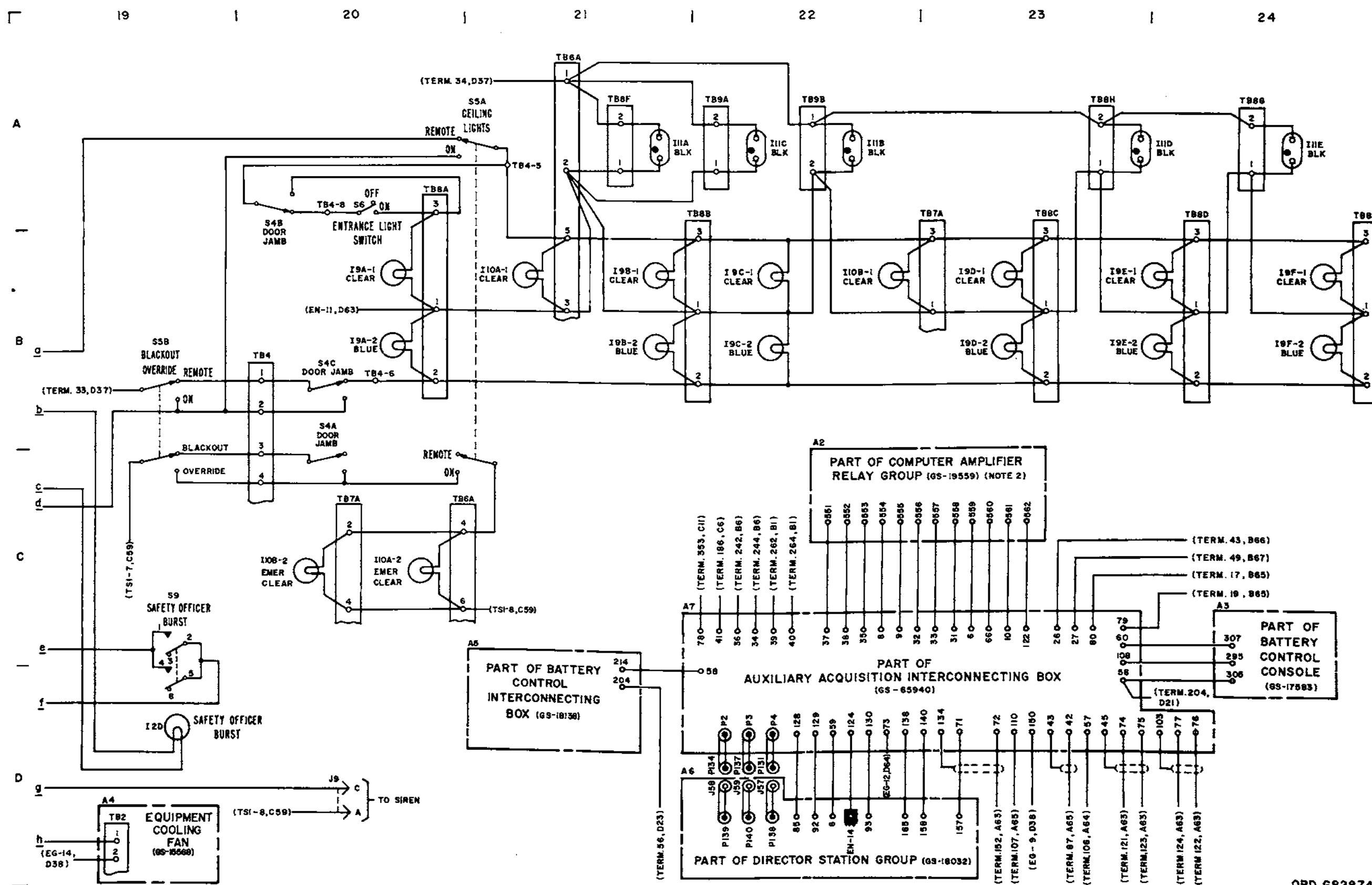


Figure 2.2 (U). Continued (sheet 4 of 17).



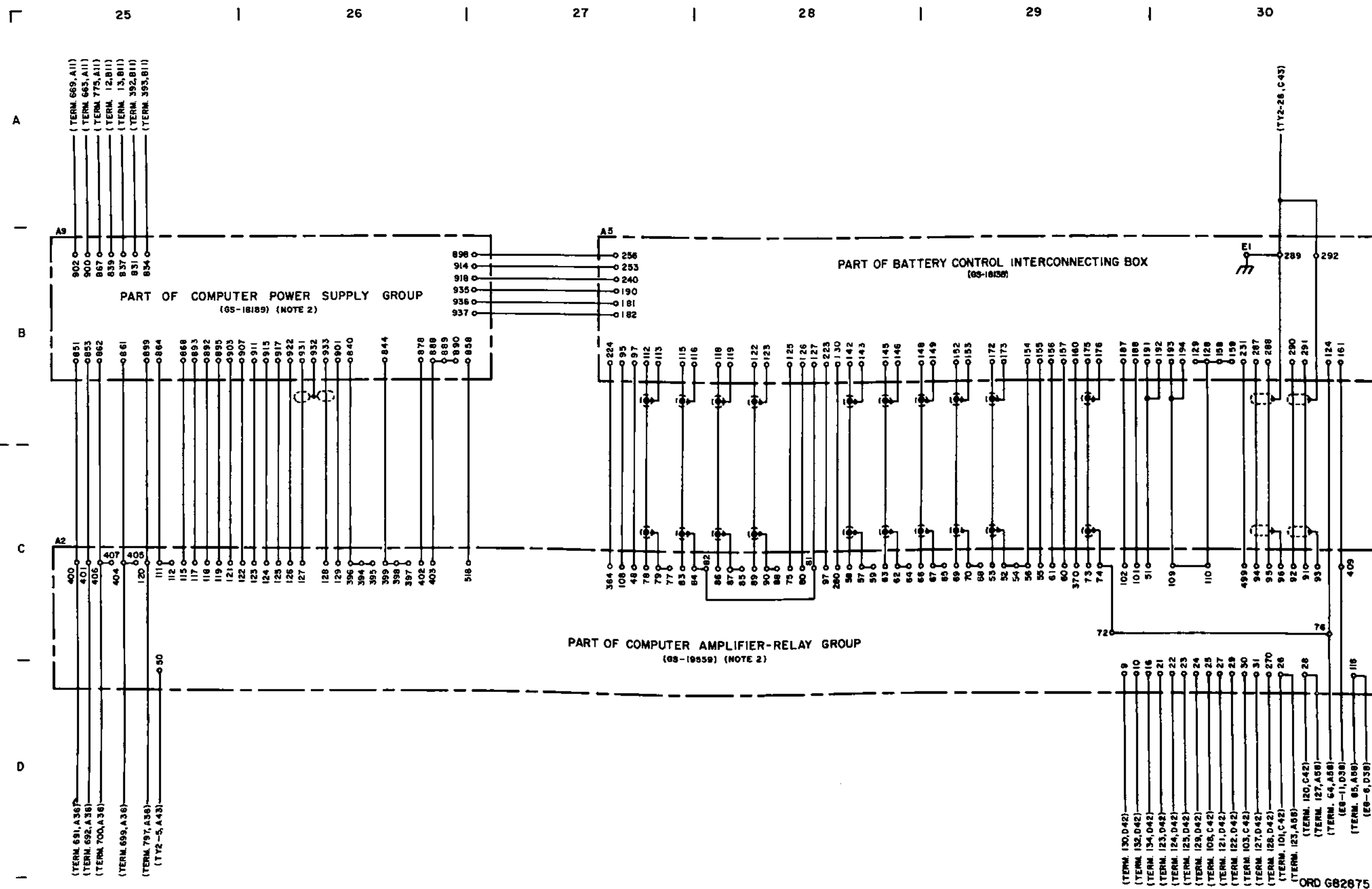


Figure 2.2 (U). Continued (sheet 5 of 17).

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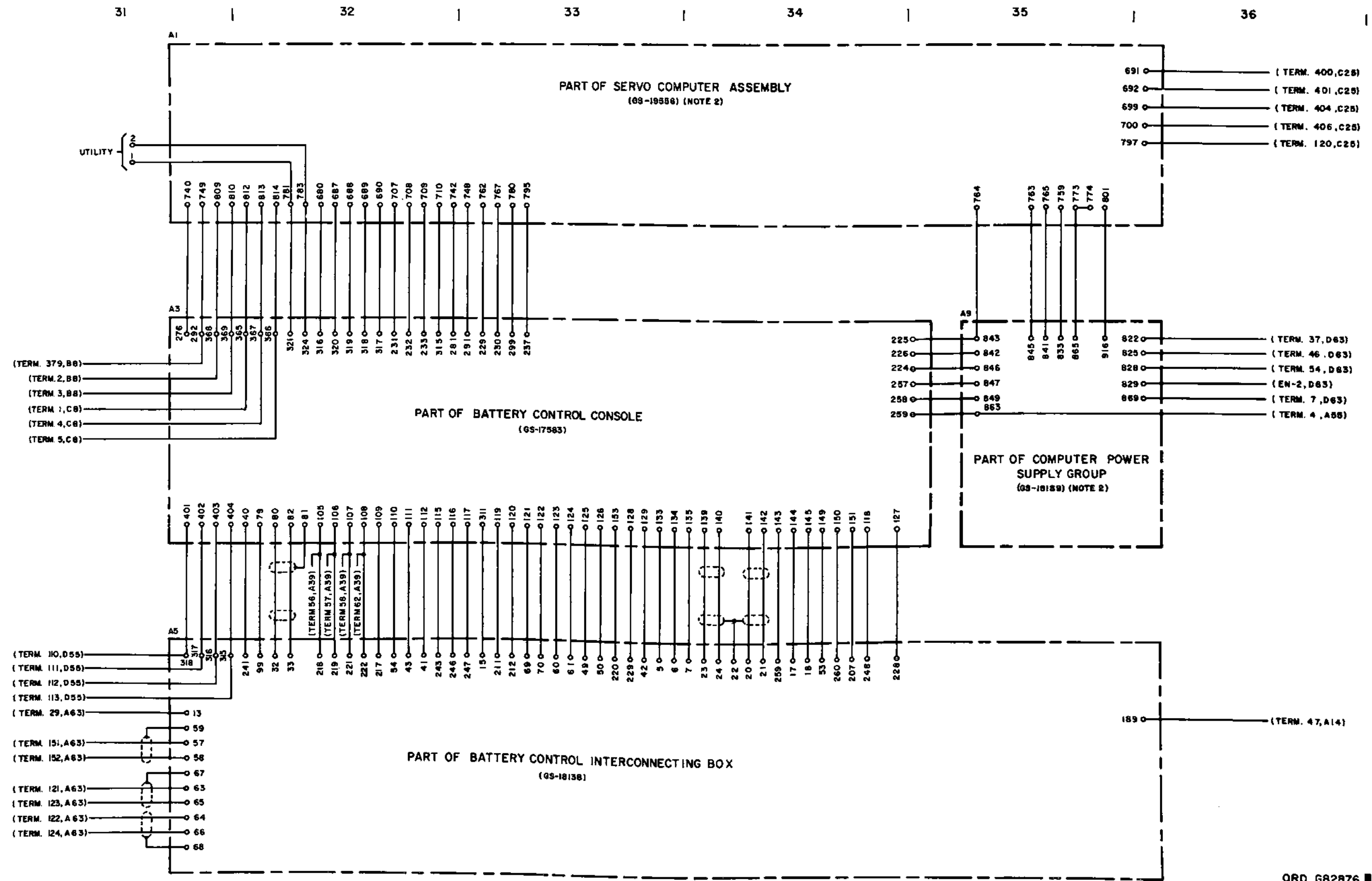
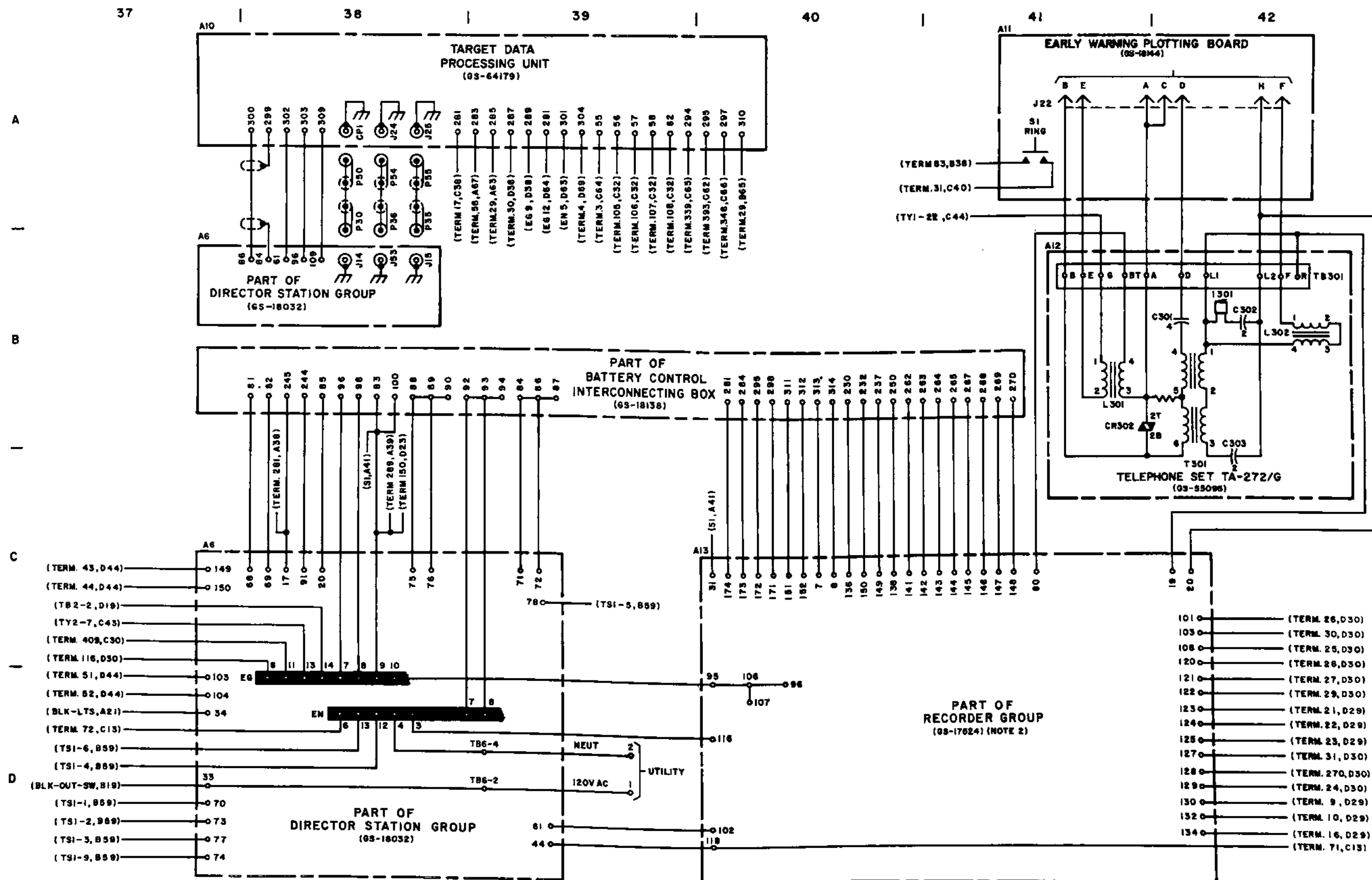
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Figure 2.2 (U). Continued (sheet 6 of 17).

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■ Figure 2.2 (U). Continued (sheet 7 of 17).

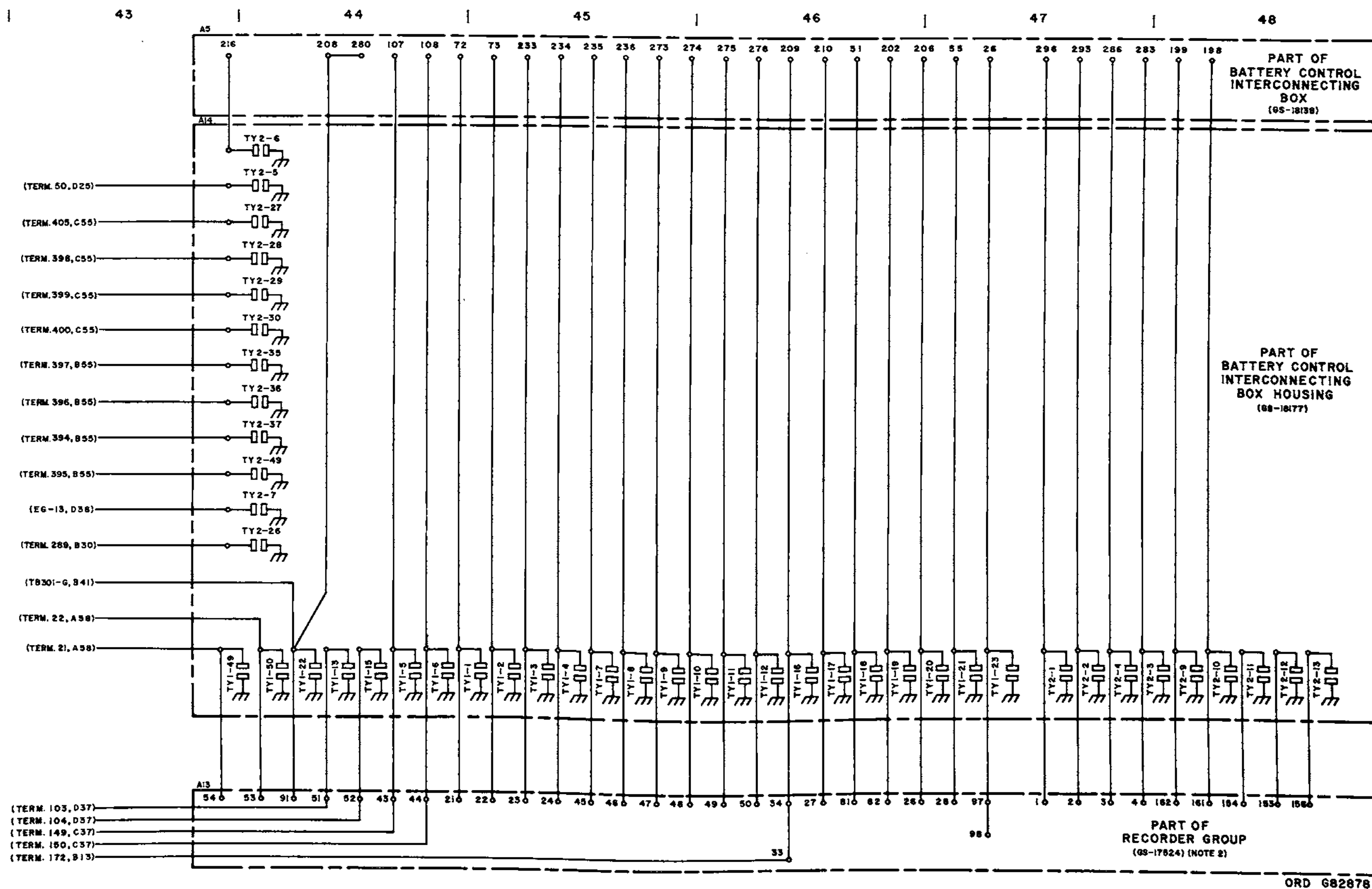


Figure 2.2 (U). Continued (sheet 8 of 17).

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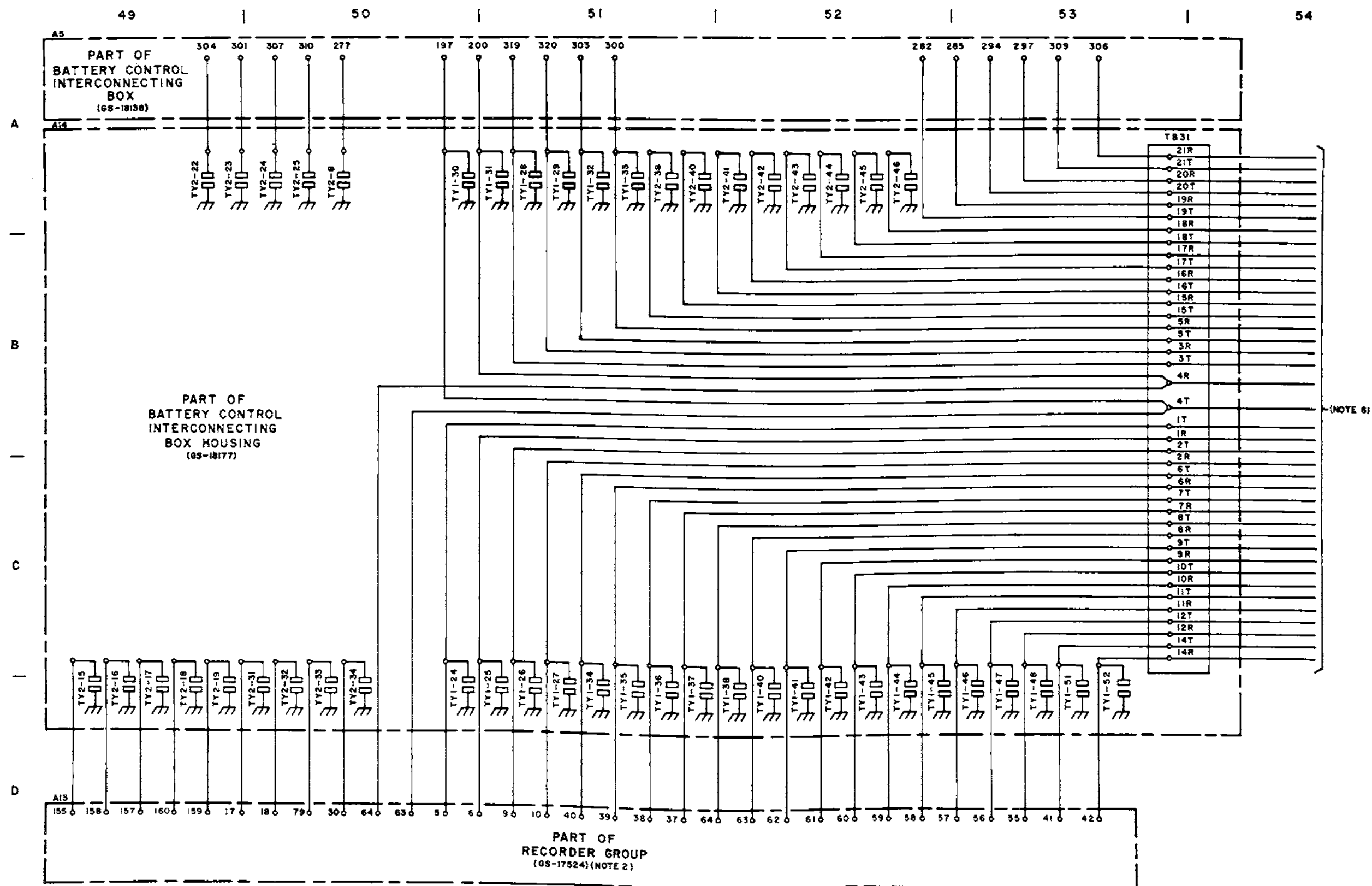


Figure 2.2 (U). Continued (sheet 9 of 17).

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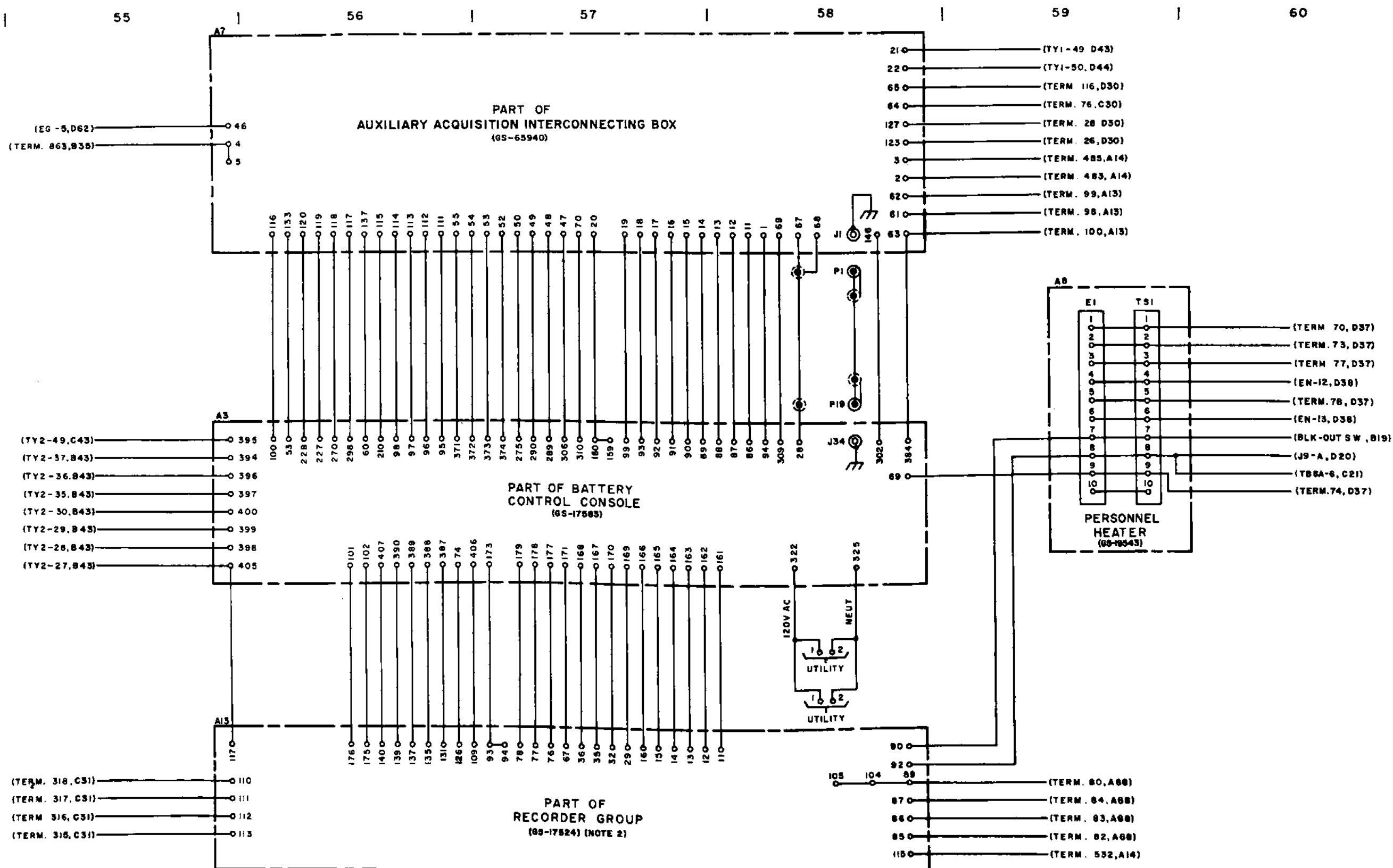
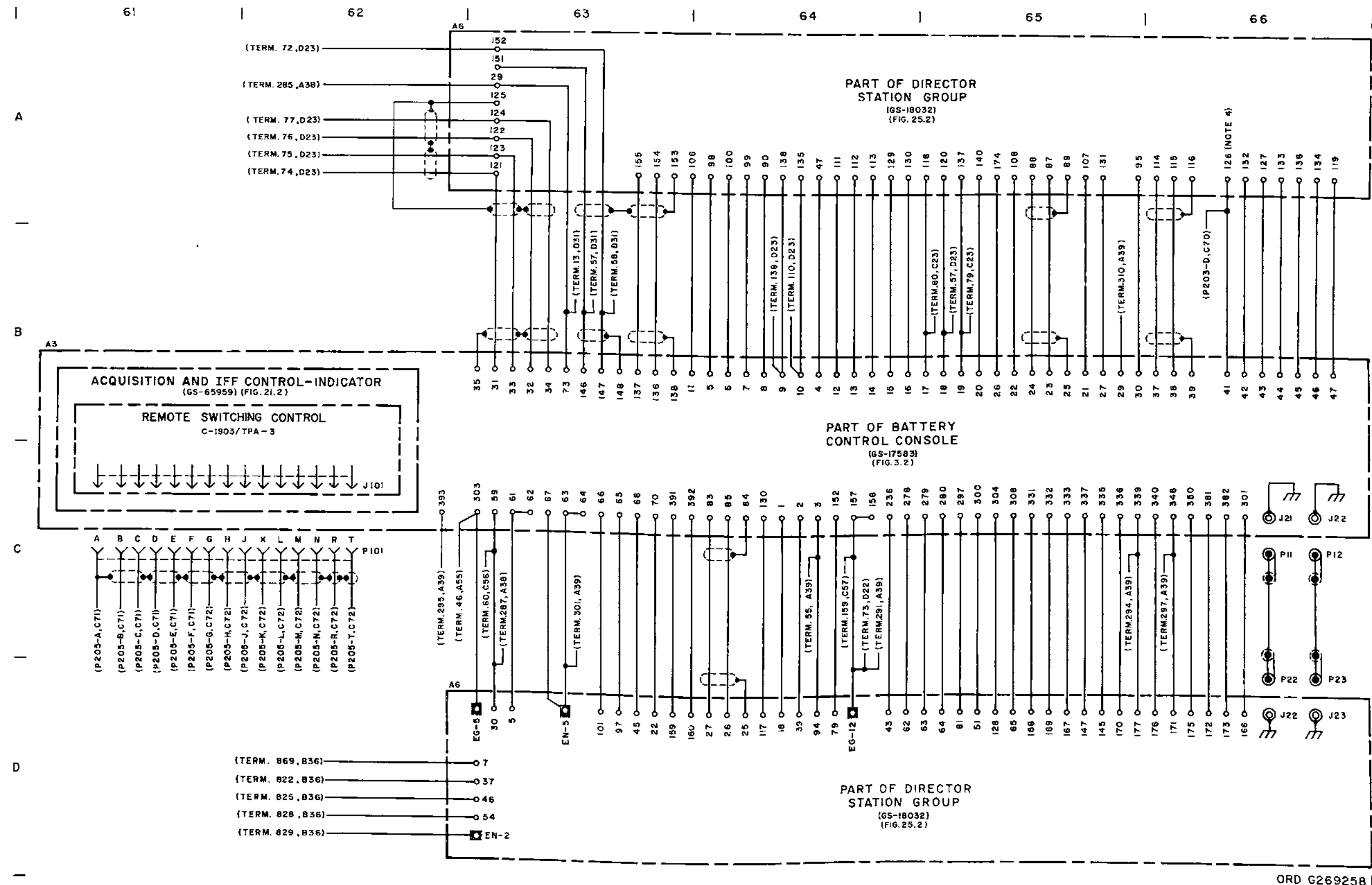


Figure 2.2 (U). Continued (sheet 10 of 17).

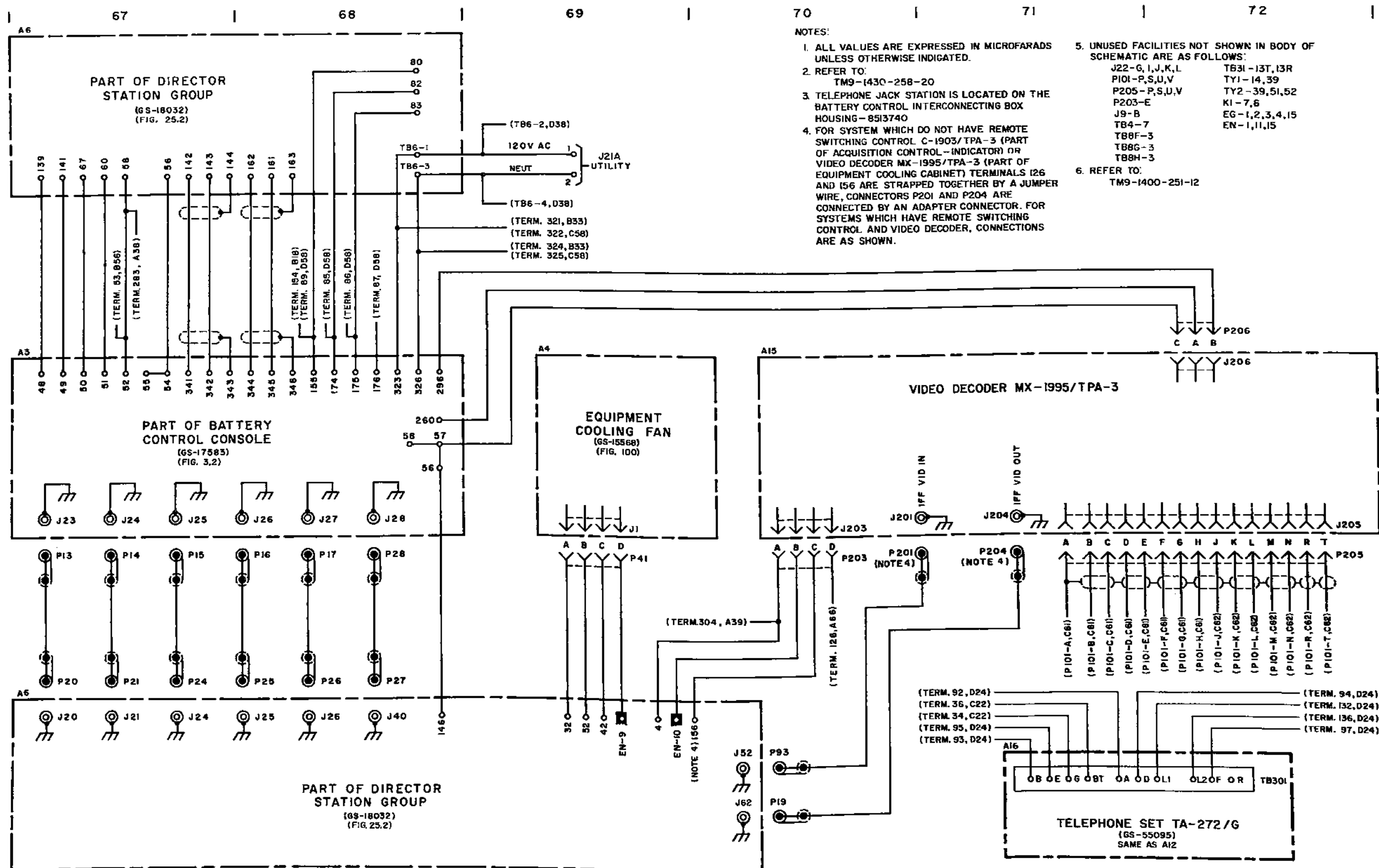
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ORD 682880





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ORD G269259

Figure 2.2 (U). Continued (sheet 12 of 17).

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**INDEX OF TERMINALS-COMPUTER AMPLIFIER-RELAY GROUP-(FIG. 16')**

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C8	55	C29	109	C30	163	C4	217	B2	271	B6	325	D17	379	B8	433	A15	487	D16	541	B10		
2	C8	56	C29	110	C30	164	C4	218	B2	272	B6	326	D17	380	C11	434	A15	488	D16	542	B10		
3	C8	57	C28	111	C25	165	C4	219	B2	273	B6	327	C9	381	B8	435	A15	489	D16	543	B10		
4	C8	58	C28	112	C25	166	C4	220	B2	274	D17	328	C9	382	B8	436	A15	490	D16	544	B10		
5	C8	59	C28	113	No CONN	167	C4	221	B3	275	B6	329	C9	383	B8	437	A15	491	No CONN	545	B10		
6	D17	60	C29	114	C2	168	C5	222	B3	276	No CONN	330	No CONN	384	B8	438	A16	492	No CONN	546	B10		
7	B11	61	C29	115	C25	169	C5	223	B3	277	No CONN	331	C9	385	B8	439	A16	493	B8	547	D16		
8	B11	62	C28	116	D30	170	C5	224	B3	278	B6	332	C9	386	B8	440	A16	494	No CONN	548	B10		
9	D29	63	C28	117	C25	171	C5	225	B3	279	B6	333	C9	387	B8	441	A16	495		549	B11		
10	D29	64	C28	118	C25	172	C5	226	B3	280	C28	334	C10	388	B8	442	A16	496		550	B11		
11	B11	65	C29	119	C25	173	C5	227	B3	281	B6	335	C10	389	B8	443	A16	497		551	C22		
12	B11	66	C28	120	C25	174	No CONN	228	B3	282	B6	336	C10	390	B11	444	A16	498	No CONN	552	C22		
13	C11	67	C29	121	C25	175	C5	229	B3	283	B6	337	C10	391	C9	445	A17	499		553	C22		
14	C1	68	C29	122	C25	176	C5	230	B3	284	B6	338	C10	392	C11	446	A17	500	B8	554	C22		
15	C1	69	C29	123	C25	177	D17	231	D14	285	B6	339	No CONN	393	B11	447	A17	501	B8	555	C22		
16	D29	70	C29	124	C26	178	C5	232	B3	286	B6	340	C10	394	C26	448	A17	502	B9	556	C22		
17	A14	71	No CONN	125	C26	179	C5	233	D14	287	C8	341	C10	395	C26	449	A17	503	B9	557	C23		
18	D17	72	C29	126	C26	180	C5	234	D14	288	C8	342	C10	396	C26	450	A18	504	B9	558	C23		
19	D18	73	C29	127	C26	181	C5	235	B3	289	C8	343	C10	397	C26	451	A17	505	B9	559	C23		
20	C1	74	C29	128	C26	182	C5	236	B3	290	C8	344	C10	398	C26	452	A17	506	B9	560	C23		
21	D30	75	C28	129	C26	183	C5	237	B3	291	B11	345	C10	399	C26	453	A17	507	B9	561	C23		
22	D30	76	C30	130	C2	184	C5	238	B3	292	C8	346	C10	400	C25	454	D14	508	B9	562	C23		
23	D30	77	C27	131	C2	185	C6	239	B3	293	C8	347	C10	401	C25	455	A18	509	B9	563	D14		
24	D30	78	C27	132	C2	186	C6	240	B4	294	B11	348	No CONN	402	C26	456	A18	510	B9	564	D14		
25	D30	79	C27	133	C2	187	C6	241	B4	295	C11	349	C10	403	C26	457	A18	511	No CONN	565	D14		
26	D30	80	C28	134	C2	188	C6	242	B4	296	C8	350	C10	404	C25	458	A18	512	No CONN	566	D13		
27	D30	81	C28	135	C2	189	C6	243	B4	297	C8	351	C10	405	C25	459	A18	513	B9	567	D13		
28	D30	82	C27	136	C2	190	C6	244	B4	298	B11	352	D17	406	C25	460	A18	514	No CONN	568	D14		
29	D30	83	C27	137	C3	191	C6	245	B4	299	No CONN	353	C10	407	C25	461	D14	515	D17	569	No CONN		
30	D30	84	C27	138	C3	192	C6	246	B4	300	C8	354	C10	408	B11	462	D14	516	D17	570	D14		
31	D30	85	C28	139	C3	193	C6	247	B4	301	No CONN	355	C10	409	C30	463	D14	517	B9	571	No CONN		
32	C1	86	C28	140	C3	194	C6	248	B4	302	C8	356	C11	410	No CONN	464	D14	518	C26	572			
33	C1	87	C28	141	C3	195	C6	249	B4	303	C8	357	C11	411	A15	465	D15	519	B9	573			
34	C1	88	C28	142	C3	196	C6	250	B4	304	C9	358	C11	412	A15	466	D15	520	B9	574			
35	C1	89	C28	143	C3	197	B1	251	B4	305	C9	359	A18	413	A16	467	D15	521	B9	575			
36	C1	90	C28	144	C3	198	B1	252	B4	306	C8	360	No CONN	414	A16	468	D15	522	B9	576			
37	C1	91	C30	145	C3	199	B1	253	B4	307	C9	361	C11	415	A16	469	D15	523	B9	577			
38	C2	92	C30	146	C3	200	B1	254	B4	308	C9	362	C11	416	A17	470	D15	524	B11	578	No CONN		
39	B11	93	C30	147	C3	201	B1	255	B5	309	No CONN	363	C11	417	A17	471	D15	525	B9	579	D14		
40	B11	94	C30	148	C3	202	B1	256	B5	310	D17	364	No CONN	418	No CONN	472	D15	526	B9	580	No CONN		
41	C2	95	C30	149	C3	203	B1	257	B5	311	C9	365	No CONN	419	A15	473	D15	527	B9				
42	A18	96	C30	150	C3	204	B1	258	B5	312	C9	366	C11	420	A15	474	D15	528	B10				
43	C2	97	C28	151	C3	205	B1	259	B5	313	B8	367	C11	421	A16	475	D15	529	B10				
44	C2	98	A13	152	C3	206	B2	260	B5	314	B8	368	No CONN	422	A16	476	D15	530	B10				
45	A15	99	A13	153	C4	207	B2	261	B5	315	B8	369	No CONN	423	A16	477	D16	531	B10				
46	C2	100	A13	154	C4	208	B2	262	B5	316	B8	370	C29	424	A17	478	D16	532	A14				
47	A14	101	C29	155	C4	209	B2	263	B5	317	B8	371	C11	425	A17	479	D16	533	B10				
48	C27	102	C29	156	C4	210	B2	264	B5	318	B8	372	No CONN	426	D17	480	D16	534	B10				
49	A14	103	C2	157	C4	211	B2	265	B5	319	No CONN	373	C11	427	A14	481	D16	535	B10				
50	D25	104	C2	158	C4	212	B2	266	B5	320	C9	374	C11	428	A15	482	D16	536	B10				
51	C29	105	D17	159	C4	213	B2	267	B5	321	C9	375	B8	429	A15	483	A14	537	B10				
52	C29	106	D17	160	C4	214	B2	268	B5	322	No CONN	376	C11	430	No CONN	484	D16	538	B10				
53	C29	107	D18	161	C4	215	B2	269	B5	323	C9	377	C11	431	No CONN	485	A14	539	B10				
54	C29	108	C27	162	C4	216	B2	270	D30	324	C9	378	C11	432	A15	486	D16	540	B10				

**Figure 2.2 (U).** Continued (sheet 13 of 17).

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INDEX OF TERMINALS-SERVO COMPUTER ASSEMBLY-(FIG. 2')														INDEX OF TERMINALS-COMPUTER POWER SUPPLY GROUP-(FIG. 49')									
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
501	D2	555	D6	609	A3	663	A11	717	B9	771	D10	825	D3	879	D8	901	No CONN	955	No CONN	909	No CONN		
502	D2	556	D6	610	No CONN	664	A11	718	B8	772	D10	826	D10	880	D8	902		956	No CONN	910	No CONN		
503	D2	557	D6	611	A4	665	A11	719	D9	773	A35	827	A1			903		957	No CONN	911	B25		
504	D2	558	D6	612	A4	666	A11	720	D1	774	A35	828	D9			904		958	B26	912	No CONN		
505	D2	559	D6	613	A4	667	A10	721	D10	775	A11	829	B9			905		959	No CONN	913	No CONN		
506	D2	560	D6	614	A4	668	A10	722	D10	776	A11	830	B9			906		960	No CONN	914	B26		
507	D3	561	D6	615	A4	669	B11	723	D10	777	D2	831	A6			907		961	B25	915	B26		
508	D3	562	D6	616	A4	670	A11	724	D10	778	No CONN	832	A3			908		962	B25	916	B25		
509	D3	563	D6	617	A4	671	D8	725	D10	779	D2	833	A2			909		963	B35	917	B26		
510	D3	564	D6	618	A4	672	No CONN	726	D11	780	A33	834	A5			910		964	B25	918	B26		
511	D3	565	D6	619	No CONN	673	D8	727	D11	781	A32	835	No CONN			911		965	B35	919	No CONN		
512	D3	566	A2	620	D8	674	D8	728	D11	782	D12	836	A2			912		966	No CONN	920	No CONN		
513	D3	567	B9	621	A4	675	D9	729	B9	783	A32	837	A1			913		967	B25	921	No CONN		
514	D3	568	No CONN	622	A4	676	D9	730	A1	784	D12	838	A4			914		968	B25	922	B26		
515	D3	569	No CONN	623	A4	677	D8	731	D11	785	No CONN	839	B9			915		969	B36	923	No CONN		
516	D3	570	A4	624	A4	678	D9	732	D11	786		840	D2			916		970	No CONN	924			
517	D3	571	D1	625	A5	679	D9	733	D11	787		841	D2			917		971		925			
518	D3	572	A1	626	A5	680	A32	734	A1	788		842	B9			918		972		926			
519	D10	573	A1	627	A5	681	B11	735	D2	789		843	No CONN			919		973		927			
520	D1	574	D2	628	A5	682	D9	736	D11	790	No CONN	844	No CONN			920	No CONN	974		928			
521	D3	575	A1	629	No CONN	683	D9	737	D11	791	D2	845	B8			921	B36	975		929			
522	D4	576	A1	630	No CONN	684	B11	738	D8	792	D11	846	No CONN			922	No CONN	976		930	No CONN		
523	D4	577	A2	631	A5	685	D9	739	D8	793	B11	847	A2			923	No CONN	977	No CONN	931	B26		
524	A2	578	A2	632	A5	686	D9	740	A31	794	B11	848	D6			924	B36	978	B26	932	B26		
525	D4	579	A2	633	A5	687	A32	741	D11	795	A33	849	A4			925	No CONN	979	No CONN	933	B26		
526	D4	580	No CONN	634	A5	688	A32	742	A33	796	B8	850	B10			926	No CONN	980		934	No CONN		
527	D4	581	A2	635	A5	689	A32	743	D11	797	A36	851	No CONN			927	B36	981		935	B26		
528	D4	582	B9	636	A5	690	A32	744	D11	798	No CONN	852				928	No CONN	982		936	B26		
529	D4	583	B9	637	A5	691	A36	745	No CONN	799	D10	853				929	No CONN	983		937	B26		
530	D4	584	A2	638	A5	692	A36	746	D11	800	D10	854	No CONN			930	B36	984		938	No CONN		
531	D4	585	D8	639	No CONN	693	D9	747	D11	801	A35	855	B10			931	B25	985		939	No CONN		
532	D4	586	A2	640	No CONN	694	D9	748	A33	802	D1	856	No CONN			932	No CONN	986		940	No CONN		
533	D4	587	A2	641	A6	695	D11	749	A31	803	A1	857	A6			933	B35	987	No CONN				
534	D4	588	A2	642	No CONN	696	B11	750	D11	804	D1	858	No CONN			934	B25	988	B26				
535	D4	589	A2	643	D4	697	D9	751	B8	805	D1	859	B10			935	No CONN	989	B26				
536	D4	590	No CONN	644	D5	698	D9	752	B8	806	D1	860	B10			936	No CONN	990	B26				
537	D4	591	A3	645	D8	699	A36	753	B8	807	D2	861	B10			937	B25	991	No CONN				
538	D5	592	A3	646	A5	700	A36	754	B8	808	B11	862	B10			938	No CONN	992	B25				
539	D5	593	A3	647	A5	701	D9	755	B8	809	A31	863	D10			939	B25	993	B25				
540	D5	594	A3	648	A6	702	D9	756	B8	810	A31	864	B9			940	B26	994	No CONN				
541	D5	595	A3	649	A6	703	D9	757	B8	811	B11	865	B9			941	B35	995	B25				
542	B9	596	A3	650	B9	704	D10	758	B8	812	A32	866	B10			942	B35	996	No CONN				
543	B9	597	A3	651	A6	705	D10	759	A35	813	A32	867	B10			943	B35	997	No CONN				
544	B9	598	A3	652	A6	706	D10	760	B11	814	A32	868	B10			944	B26	998	B26				
545	D5	599	A3	653	A6	707	A32	761	B11	815	B11	869	B9			945	B35	999	B25				
546	D5	600	D5	654	A6	708	A32	762	A33	816	D8	870	B10			946	B35	900	B25				
547	B10	601	B10	655	A6	709	A32	763	A35	817	D1	871	B9			947	B35	901	B26				
548	D5	602	B10	656	A8	710	A32	764	A35	818	D2	872	B10			948	No CONN	902	B25				
549	D5	603	B10	657	D8	711	D10	765	A35	819	A3	873	B10			949	B35	903	B25				
550	D5	604	B10	658	D8	712	D10	766	B11	820	A1	874	D1			950	No CONN	904	No CONN				
551	D5	605	A3	659	B9	713	D10	767	A33	821	A6	875	A8			951	B25	905	No CONN				
552	D5	606	A3	660	B10	714	D10	768	D10	822	B9	876	A8			952	No CONN	906	No CONN				
553	D5	607	A3	661	B11	715	D10	769	No CONN	823	B9	877	A8			953	B25	907	B25				
554	D5	608	A3	662	A11	716	No CONN	770	No CONN	824	D1	878	D8			954	No CONN	908	No CONN				

Figure 2.2 (U). Continued (sheet 14 of 17).

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INDEX OF TERMINALS—BATTERY CONTROL INTERCONNECTING BOX												INDEX OF TERMINALS—BATTERY CONTROL INTERCONNECTING BOX HOUSING						INDEX OF TERMINALS—AUXILIARY ACQUISITION INTERCONNECTING BOX					
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	No Conn	55	A17	109	No Conn	163	No Conn	217	C32	271	No Conn	TB31-1T	B53	TY1-13	D44	TY2-15	D49	1	B58	55	B56	109	No Conn
2	↑	56	No Conn	110	No Conn	164	↑	218	C32	272	No Conn	-1R	B53	-14	No Conn	-16	D49	2	A58	56	D23	110	D23
3	↓	57	D31	111	No Conn	165	↓	219	C32	273	A45	-2T	B53	-15	D44	-17	D49	3	A58	57	D22	111	B56
4	No Conn	58	D31	112	B27	166	↑	220	C34	274	A45	-2R	C53	-16	D46	-18	D49	4	A55	58	D22	112	B56
5	C33	59	D31	113	B27	167	↑	221	C32	275	A46	-3T	B53	-17	D46	-19	D49	5	A55	59	D22	113	B56
6	C33	60	C33	114	No Conn	168	↑	222	C32	276	A46	-3R	B53	-18	D46	-20	No Conn	6	C23	60	C23	114	B56
7	C34	61	C33	115	B27	169	↑	223	B28	277	A50	-4T	B53	-19	D46	-21	No Conn	7	No Conn	61	B58	115	B56
8	No Conn	62	No Conn	116	B27	170	↓	224	No Conn	278	No Conn	-4R	B53	-20	D47	-22	A49	8	C22	62	A58	116	B56
9	↑	63	D31	117	No Conn	171	No Conn	225	No Conn	279	No Conn	-5T	B53	-21	D47	-23	A49	9	C22	63	B58	117	B56
10	↓	64	D31	118	No Conn	172	No Conn	226	No Conn	280	A44	-5R	B53	-22	D44	-24	A50	10	No Conn	64	A58	118	B56
11	↑	65	D31	119	B28	173	B29	227	No Conn	281	B40	-6T	C53	-23	D47	-25	A50	11	B58	65	A58	119	B56
12	No Conn	66	D31	120	No Conn	174	No Conn	228	C33	282	A52	-6R	C53	-24	D50	-26	C44	12	B58	66	C23	120	B56
13	D31	67	D31	121	No Conn	175	B29	229	C33	283	A47	-7T	C53	-25	D50	-27	A44	13	B57	67	B58	121	No Conn
14	No Conn	68	D31	122	B28	176	B29	230	B40	284	B40	-7R	C53	-26	D51	-28	B44	14	B57	68	B58	122	C23
15	C34	69	C33	123	B28	177	No Conn	231	B30	285	A53	-8T	C53	-27	D51	-29	B44	15	B57	69	B58	123	A58
16	No Conn	70	C33	124	B30	178	↑	232	B40	286	A47	-8R	C53	-28	A51	-31	B44	16	B57	70	B57	124	D23
17	C34	71	No Conn	125	B28	179	↓	233	A45	287	B30	-9T	C53	-29	A51	-31	D49	17	B57	71	D22	125	No Conn
18	C34	72	A44	126	B28	180	No Conn	234	A45	288	B30	-9R	C53	-30	A50	-32	D50	18	B57	72	D22	126	No Conn
19	No Conn	73	A45	127	B28	181	B27	235	A45	289	B30	-10T	C53	-31	A50	-33	D50	19	B57	73	D22	127	A58
20	C34	74	No Conn	128	B30	182	B27	236	A45	290	B30	-10R	C53	-32	A51	-34	D50	20	B57	74	D22	128	D23
21	C34	75	↑	129	B30	183	No Conn	237	B40	291	B30	-11T	C53	-33	A51	-35	B44	21	A58	75	D23	129	D23
22	C34	76	↑	130	B28	184	↑	238	No Conn	292	B30	-11R	C53	-34	D51	-36	B44	22	A58	76	D23	130	D23
23	C34	77	↓	131	No Conn	185	↓	239	No Conn	293	A47	-12T	C53	-35	D51	-37	C44	23	No Conn	77	D23	131	No Conn
24	C34	78	↑	132	↑	186	No Conn	240	B27	294	A53	-12R	C53	-36	D51	-38	A51	24	No Conn	78	C22	132	↑
25	No Conn	79	↓	133	↑	187	B29	241	C31	295	B40	-13T	No Conn	-37	D51	-39	No Conn	25	No Conn	79	C23	133	B56
26	A47	80	No Conn	134	↑	188	B29	242	No Conn	296	A47	-13R	No Conn	-38	D51	-40	A51	26	C23	80	No Conn	134	No Conn
27	No Conn	81	B38	135	↑	189	D36	243	C32	297	A53	-14T	C53	-39	No Conn	-41	A51	27	C23	81	↑	135	No Conn
28	↑	82	B38	136	↑	190	B27	244	B38	298	B40	-14R	C53	-40	D52	-42	A52	28	No Conn	82	↑	136	No Conn
29	↓	83	B38	137	↑	191	B29	245	B38	299	No Conn	-15T	B53	-41	D52	-43	A52	29	No Conn	83	↑	137	B56
30	↑	84	B39	138	↑	192	B30	246	C32	300	A51	-15R	B53	-42	D52	-44	A52	30	No Conn	84	↑	138	D23
31	No Conn	85	B38	139	↓	193	B30	247	C32	301	A49	-16T	B53	-43	D52	-45	A52	31	C23	85	↑	139	No Conn
32	C32	86	B39	140	↓	194	B30	248	C32	302	No Conn	-16R	B53	-44	D52	-46	A52	32	C23	86	↑	140	D23
33	C32	87	B39	141	No Conn	195	No Conn	249	No Conn	303	A51	-17T	B53	-45	D52	-47	No Conn	33	C23	87	↑	141	No Conn
34	No Conn	88	B38	142	B28	196	No Conn	250	B40	304	A49	-17R	B53	-46	D52	-48	No Conn	34	C22	88	↑	142	↑
35	No Conn	89	B38	143	B28	197	A50	251	No Conn	305	No Conn	-18T	A53	-47	D53	-49	C44	35	C22	89	↑	143	↑
36	No Conn	90	B38	144	No Conn	198	A48	252	No Conn	306	A53	-18R	A53	-48	D53	-50	No Conn	36	C22	90	↑	144	↓
37	↑	91	No Conn	145	B28	199	A48	253	B27	307	A50	-19T	A53	-49	D43	-51	No Conn	37	C22	91	↑	145	No Conn
38	↓	92	B38	146	B28	200	A50	254	No Conn	308	No Conn	-19R	A53	-50	D44	-52	No Conn	38	C22	92	↑	146	B58
39	↑	93	B39	147	No Conn	201	No Conn	255	No Conn	309	A53	-20T	A53	-51	D53			39	C22	93	↑	147	No Conn
40	No Conn	94	B39	148	B28	202	A46	256	B27	310	A50	-20R	A53	-52	D53			40	C22	94	↑	148	No Conn
41	C32	95	B27	149	B29	203	No Conn	257	No Conn	311	B40	-21T	A53	TY2-1	D47			41	C22	95	↑	149	No Conn
42	C33	96	B38	150	No Conn	204	C21	258	No Conn	312	B40	-21R	A53	-2	D47			42	D22	96	↑	150	D23
43	C33	97	B27	151	No Conn	205	No Conn	259	C34	313	B40	TY1-1	D44	-3	D47			43	No Conn	97	↑		
44	No Conn	98	B38	152	B29	206	A46	260	C34	314	B40	-2	D45	-4	D47			44	No Conn	98	↑		
45	↑	99	C32	153	B29	207	C34	261	No Conn	315	C31	-3	D45	-5	A44			45	No Conn	99	↑		
46	↓	100	B38	154	B29	208	A44	262	B40	316	C31	-4	D45	-6	A44			46	A55	100	↑		
47	↑	101	No Conn	155	B29	209	A46	263	B40	317	C31	-5	D44	-7	C44			47	B57	101	↑		
48	No Conn	102	↑	156	B29	210	A46	264	B41	318	C31	-6	D44	-8	A50			48	B57	102	↑		
49	C33	103	↑	157	B29	211	C33	265	B41	319	A51	-7	D45	-9	D48			49	B57	103	↑		
50	C33	104	↑	158	B30	212	C33	266	No Conn	320	A51	-8	D45	-10	D48			50	B57	104	↑		
51	A46	105	↓	159	B30	213	No Conn	267	B41			-9	D45	-11	D48			51	No Conn	105	↑		
52	No Conn	106	No Conn	160	B24	214	C21	268	B41			-10	D45	-12	D48			52	B57	106	↑		
53	C34	107	A44	161	B30	215	No Conn	269	B41			-11	D46	-13	D48			53	B57	107	No Conn	↑	
54	C32	108	A44	162	A43	216	A43	270	B41			-12	D46	-14	No Conn			54	B56	108	D23	↑	

Figure 2.2 (U). Continued (sheet 15 of 17).

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INDEX OF TERMINALS - BATTERY CONTROL CONSOLE - (FIG. 3)														INDEX OF TERMINALS - RECORDER GROUP - (FIG. 59*)									
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C64	55	B67	109	C32	163	C57	217	B16	271	C16	325	C58	379	C17	1	D47	55	D53	109	D56	163	D50
2	C64	56	C68	110	C32	164	C57	218	B17	272	C16	326	B68	380	C17	2	D47	56	D53	110	D55	164	D50
3	C64	57	C68	111	C32	165	C57	219	B17	273	C16	327	No Conn	381	C66	3	D47	57	D52	111	D55	165	No Conn
4	B64	58	C68	112	C32	166	C57	220	B15	274	C16	328	↑	382	C66	4	D47	58	D52	112	D55	166	↑
5	B64	59	C63	113	B14	167	C57	221	B17	275	B57	329	↓	383	C18	5	D50	59	D52	113	D55	167	↓
6	B64	60	B56	114	B14	168	C57	222	B17	276	B31	330	No Conn	384	B58	6	D51	60	D52	114	No Conn	168	↓
7	B64	61	C63	115	C32	169	C57	223	B17	277	C16	331	C65	385	C18	7	C40	61	D52	115	D58	169	↓
8	B64	62	C63	116	C32	170	C57	224	B34	278	C64	332	C65	386	C18	8	C40	62	D52	116	D39	170	No Conn
9	B64	63	C63	117	C33	171	C57	225	B34	279	C65	333	C65	387	C56	9	D51	63	D52	117	D55	171	C40
10	B64	64	C63	118	C33	172	B13	226	B34	280	C65	334	No Conn	388	C56	10	D51	64	D51	118	D39	172	C40
11	B64	65	C63	119	C33	173	C57	227	B56	281	B32	335	C65	389	C56	11	D58	65	No Conn	119	No Conn	173	C40
12	B64	66	C63	120	C33	174	B68	228	B56	282	B14	336	C65	390	C56	12	D58	66	No Conn	120	C42	174	C40
13	B64	67	C63	121	C33	175	B68	229	B33	283	C16	337	C65	391	C63	13	D57	67	D57	121	C42	175	D56
14	B64	68	C63	122	C33	176	B68	230	B33	284	No Conn	338	No Conn	392	C63	14	D57	68	No Conn	122	C42	176	D56
15	B64	69	B58	123	C33	177	C57	231	B32	285	C16	339	C65	393	No Conn	15	D57	69	↑	123	D42	177	No Conn
16	B64	70	C63	124	C33	178	C57	232	B32	286	C16	340	C66	394	B55	16	D57	70	↑	124	D42	178	↑
17	B65	71	C13	125	C33	179	C57	233	B32	287	C16	341	B67	395	B55	17	D49	71	↑	125	D42	179	↑
18	B65	72	C13	126	C33	180	B18	234	C14	288	C16	342	B67	396	B55	18	D50	72	↑	126	D56	180	↑
19	B65	73	B63	127	C33	181	B15	235	B14	289	B57	343	B67	397	B55	19	C42	73	↓	127	D42	181	↑
20	B65	74	C56	128	C33	182	B15	236	C64	290	B57	344	B68	398	C55	20	C42	74	↓	128	D42	182	↑
21	B65	75	C18	129	C33	183	B16	237	B33	291	B33	345	B68	399	C55	21	D44	75	No Conn	129	D42	183	↑
22	B65	76	C13	130	C64	184	B16	238	C14	292	B31	346	B68	400	C55	22	D45	76	D57	130	D42	184	↑
23	B65	77	C18	131	B14	185	B17	239	C14	293	C16	347	No Conn	401	C31	23	D45	77	D57	131	D56	185	↑
24	B65	78	C13	132	No Conn	186	B16	240	C14	295	No Conn	348	C66	402	C31	24	D45	78	D57	132	D42	186	↑
25	B65	79	C32	133	C33	187	B17	241	B18	295	D24	349	No Conn	403	C31	25	No Conn	79	D50	133	No Conn	187	↑
26	B65	80	C32	134	C33	188	B18	242	B18	296	B68	350	C66	404	C31	26	D46	80	C41	134	D42	188	↑
27	B65	81	C32	135	C34	189	B18	243	B18	297	C65	351	No Conn	405	C55	27	D46	81	D46	135	D56	189	↑
28	B58	82	C32	136	B63	190	C18	244	B18	298	B56	352	↑	406	C56	28	D47	82	D46	136	C40	190	↑
29	B65	83	C64	137	B63	191	B15	245	B18	299	B33	353	↓	407	C56	29	D57	83	No Conn	137	D56	191	↑
30	B65	84	C64	138	B63	192	B15	246	B18	300	C65	354	↓	408	No Conn	30	D50	84	No Conn	138	C40	192	↑
31	B63	85	C64	139	C34	193	B16	247	C14	301	C66	355	↓	409	No Conn	31	C40	85	D58	139	D56	193	↑
32	B63	86	B58	140	C34	194	B16	248	C14	302	B58	356	No Conn	410	No Conn	32	D57	86	D58	140	D56	194	↑
33	B63	87	B58	141	C34	195	B17	249	C14	303	C63	357	C17			33	D46	87	D58	141	C40	195	↑
34	B63	88	B58	142	C34	196	B16	250	C15	304	C65	358	B13			34	D46	88	No Conn	142	C40	196	↑
35	B63	89	B57	143	C34	197	B17	251	C15	305	D24	359	C17	451	C14	35	D57	89	D58	143	C41	197	↑
36	No Conn	90	B57	144	C34	198	B14	252	C15	306	B57	360	C17	452	C13	36	D57	90	D58	144	C41	198	↑
37	B66	91	B57	145	C34	199	B15	253	C15	307	C24	361	C17	453	C13	37	D51	91	D44	145	C41	199	↓
38	B66	92	B57	146	B63	200	B15	254	C15	308	C65	362	C17	454	C14	38	D51	92	D58	146	C41	200	No Conn
39	B66	93	B57	147	B63	201	B15	255	C13	309	B58	363	C17	455	C14	39	D51	93	D57	147	C41		
40	C32	94	B58	148	B63	202	B15	256	B13	310	B57	364	C17	456	C14	40	D51	94	D57	148	C41		
41	B66	95	B56	149	C34	203	B15	257	B34	311	C34	365	B31	457	C14	41	D53	95	D39	149	C40		
42	B66	96	B56	150	C34	204	B15	258	B34	312	No Conn	366	B32	458	C14	42	D53	96	D40	150	C40		
43	B66	97	B56	151	C34	205	B15	259	B34	313	No Conn	367	B32			43	D44	97	D47	151	C40		
44	B66	98	B56	152	C64	206	B15	260	B68	314	No Conn	368	B31			44	D44	98	D47	152	C40		
45	B66	99	B57	153	C34	207	B16	261	C15	315	B32	369	B31			45	D45	99	No Conn	153	D48		
46	B66	100	B56	154	B18	208	B16	262	C15	316	B32	370	No Conn			46	D45	100	No Conn	154	D48		
47	B66	101	C56	155	B68	209	B16	263	C15	317	B32	371	B56			47	D45	101	C42	155	D49		
48	B67	102	C56	156	C18	210	B56	264	C15	318	B32	372	B56			48	D45	102	D39	156	D48		
49	B67	103	B14	157	C64	211	B16	265	C15	319	B32	373	B57			49	D46	103	C42	157	D49		
50	B67	104	No Conn	158	C64	212	B16	266	C15	320	B32	374	B57			50	D46	104	D58	158	D49		
51	B67	105	C32	159	B57	213	B16	267	C15	321	B32	375	C17			51	D44	105	D58	159	D49		
52	B67	106	C32	160	B57	214	B17	268	C16	322	C58	376	C17			52	D44	106	D40	160	D49		
53	B56	107	C32	161	C58	215	B17	269	C16	323	B68	377	C17			53	D44	107	D40	161	D48		
54	B67	108	C32	162	C57	216	B17	270	B56	324	B32	378	C17			54	D43	108	C42	162	D48		

Figure 2.2 (U). Continued (sheet 16 of 17).

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INDEX OF TERMINALS — DIRECTOR STATION GROUP								INDEX OF TERMINALS — UTILITY CABINET				INDEX OF TERMINALS — TARGET DATA PROCESSING UNIT											
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	No Conn	55	No Conn	109	A38	163	A68	TB2-1	D19			1	No Conn	30	No Conn	59	No Conn	286	No Conn	315	No Conn		
2	No Conn	56	A67	110	No Conn	164	No Conn	TB2-2	D19			2	↑	31	↑	60	No Conn	287	A39	316	↑		
3	No Conn	57	No Conn	111	A64	165	D23					3		32		61	No Conn	288	No Conn	317			
4	D69	58	A67	112	A64	166	D68					4		33		62	A39	289	A39	318			
5	D63	59	No Conn	113	A64	167	D65					5		34		63	No Conn	290	No Conn	319	↓		
6	D22	60	A67	114	A66	168	D65					6		35		64	↑	291	A39	320	No Conn		
7	D63	61	A38	115	A66	169	D65					7		36		65		292	No Conn				
8	No Conn	62	D64	116	A66	170	D65					8		37		66		293	No Conn				
9	↑	63	D65	117	D64	171	D66					9		38		67		294	A39				
10		64	D65	118	A65	172	D66					10		39		68		295	A40				
11		65	D65	119	A66	173	D66					11		40		69		296	No Conn				
12		66	D39	120	A65	174	A65					12		41		70		297	A40				
13		67	A67	121	A63	175	D66					13		42		71		298	No Conn				
14		68	C38	122	A63	176	D66					14		43		72		299	A38				
15	↓	69	C38	123	A63	177	D65					15		44		73		300	A38				
16	No Conn	70	D37	124	A63							16		45		74		301	A39				
17	C38	71	C39	125	A63	1181	A68					17		46		75		302	A38				
18	D64	72	C39	126	A66	1182	D39					18		47		76		303	A38				
19	No Conn	73	D37	127	A66	1183	A68					19		48		77		304	A39				
20	C38	74	No Conn	128	D65	1184	D39					20		49		78		305	No Conn				
21	No Conn	75	C38	129	A64							21		50		79	↓	306	↑				
22	D63	76	C38	130	A64	EG-1	No Conn					22		51		80	No Conn	307	↓				
23	No Conn	77	D37	131	A65	-2	↑					23		52				308	No Conn				
24	No Conn	78	D37	132	A66	-3	↓					24		53	↓			309	A38				
25	D64	79	D64	133	A66	-4	No Conn					25		54	No Conn	281	A38	310	A40				
26	D64	80	A68	134	A66	-5	D63					26		55	A39	282	No Conn	311	No Conn				
27	D64	81	D65	135	A64	-6	D38					27		56	A39	283	A39	312	↑				
28	No Conn	82	A68	136	A66	-7	D38					28		57	A39	284	No Conn	313	↓				
29	A63	83	A68	137	A65	-8	D38					29	No Conn	58	A39	285	A39	314	No Conn				
30	D63	84	A38	138	A64	-9	D38																
31	No Conn	85	D23	139	A67	-10	D38																
32	D69	86	A38	140	A65	-11	D38																
33	D37	87	A65	141	A67	-12	No Conn																
34	D37	88	A65	142	A67	-13	D38																
35	No Conn	89	A65	143	A67	-14	D38																
36	No Conn	90	A64	144	A67	-15	No Conn																
37	D63	91	C38	145	D65																		
38	No Conn	92	D23	146	D68	EN-1	No Conn																
39	D64	93	D23	147	D65	-2	D63																
40	No Conn	94	D64	148	No Conn	-3	D38																
41	No Conn	95	A65	149	C37	-4	D38																
42	D69	96	A38	150	C37	-5	D63																
43	D64	97	D63	151	A63	-6	D38																
44	D39	98	A64	152	A63	-7	D39																
45	D63	99	A64	153	A63	-8	D39																
46	D63	100	A64	154	A63	-9	D69																
47	A64	101	D63	155	A63	-10	D69																
48	No Conn	102	No Conn	156	D69	-11	D63																
49	No Conn	103	D37	157	D23	-12	D38																
50	No Conn	104	D37	158	D23	-13	D38																
51	D65	105	No Conn	159	D63	-14	No Conn																
52	D69	106	A64	160	D63	-15	No Conn																
53	No Conn	107	A65	161	A68																		
54	D63	108	A65	162	A68																		

Figure 2.2 (U). Continued (sheet 17 of 17).

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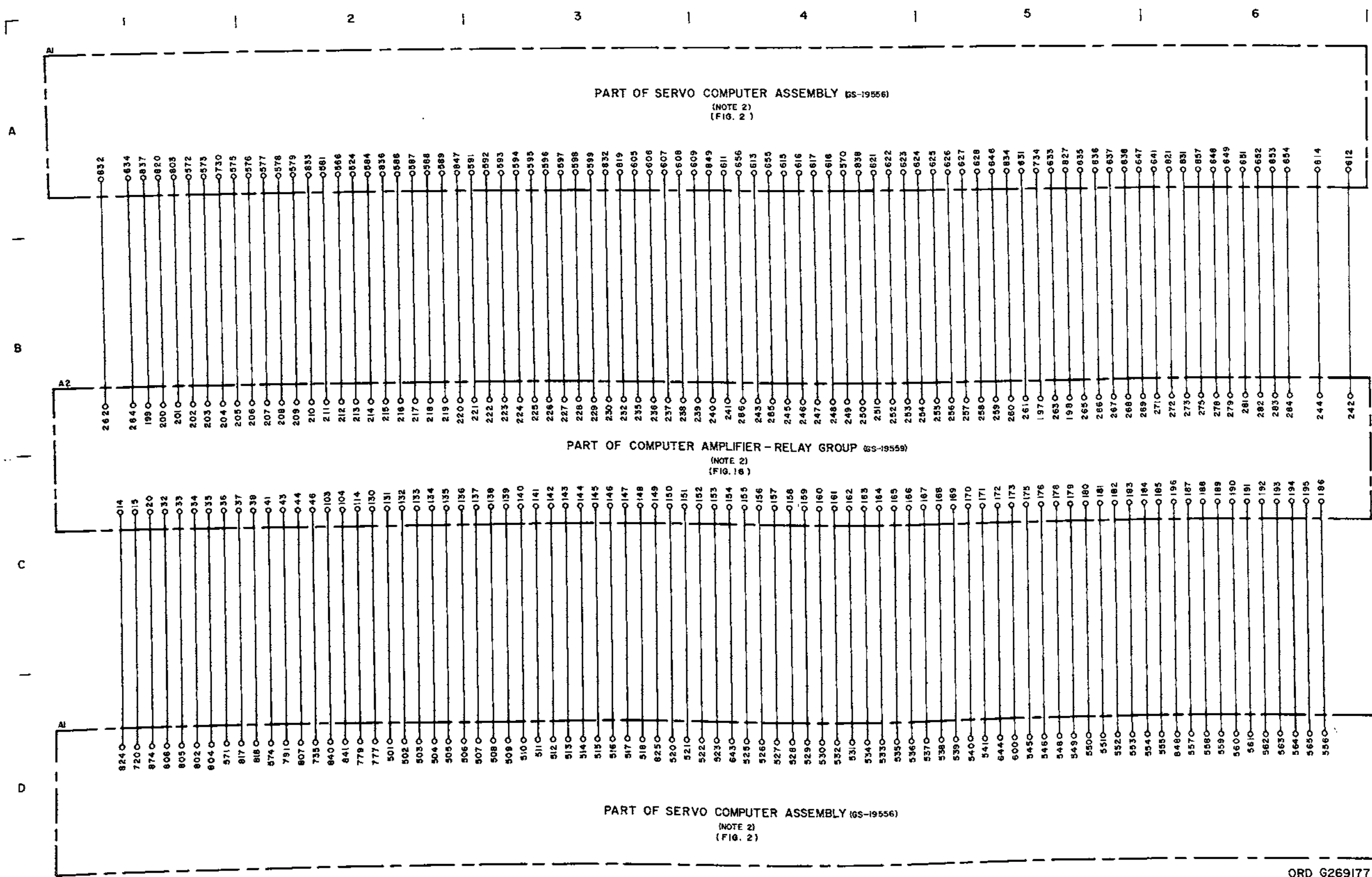
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A3					8173147	GS-17583
A4					8010350	GS-15568
A5					8512908	GS-18138
A6					8513626	GS-18032
A7					9986480	GS-65940
A8					8517797	GS-18189
A9					8512882	GS-18144
A10					8010134	GS-55095
C301	4	±10		600	7593727	
C302	2	±10		600	7593726	
C303	2	±10		600	7593726	
CR302					8024363	
I301					7653456	
L301					8007179	
L302					8007179	
T301					8007193	
TB301					8175113	
A11					8019167	GS-17524
A12					8513740	GS-18177
TB31					8008374	
TY1					8008998	
TY2					8008998	
A13					9005301	GS-19543
A14					MX-1995/TPA-3	NONE
A15					9985626	GS-65793
A16					9990673	GS-67179
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I9A-2			6	120	8328090	
I9B-1			25	120	8330088	
I9B-2			6	120	8328090	
I9C-1			25	120	8330088	
I9C-2			6	120	8328090	
I9D-1			25	120	8330088	
I9D-2		2	6	120	8328090	
I9E-1			25	120	8330088	
I9E-2			6	120	8328090	
I9F-1			25	120	8330088	
I9F-2			6	120	8328090	
I10A-1			6	120	8338088	
I10A-2					193048	
I10B-1			6	120	8338088	
I10B-2					193048	
I11A			8		8331295	
I11B			8		8331295	
I11C			8		8331295	
I11D			8		8331295	
I11E			8		8331295	
I20					572994	
J9					7720490	
J22					8175623	
P1					MS35170	
P2					MS35170	
P3					MS35170	
P4					MS35170	
P11					MS35170	
P12					MS35170	
P13					MS35170	

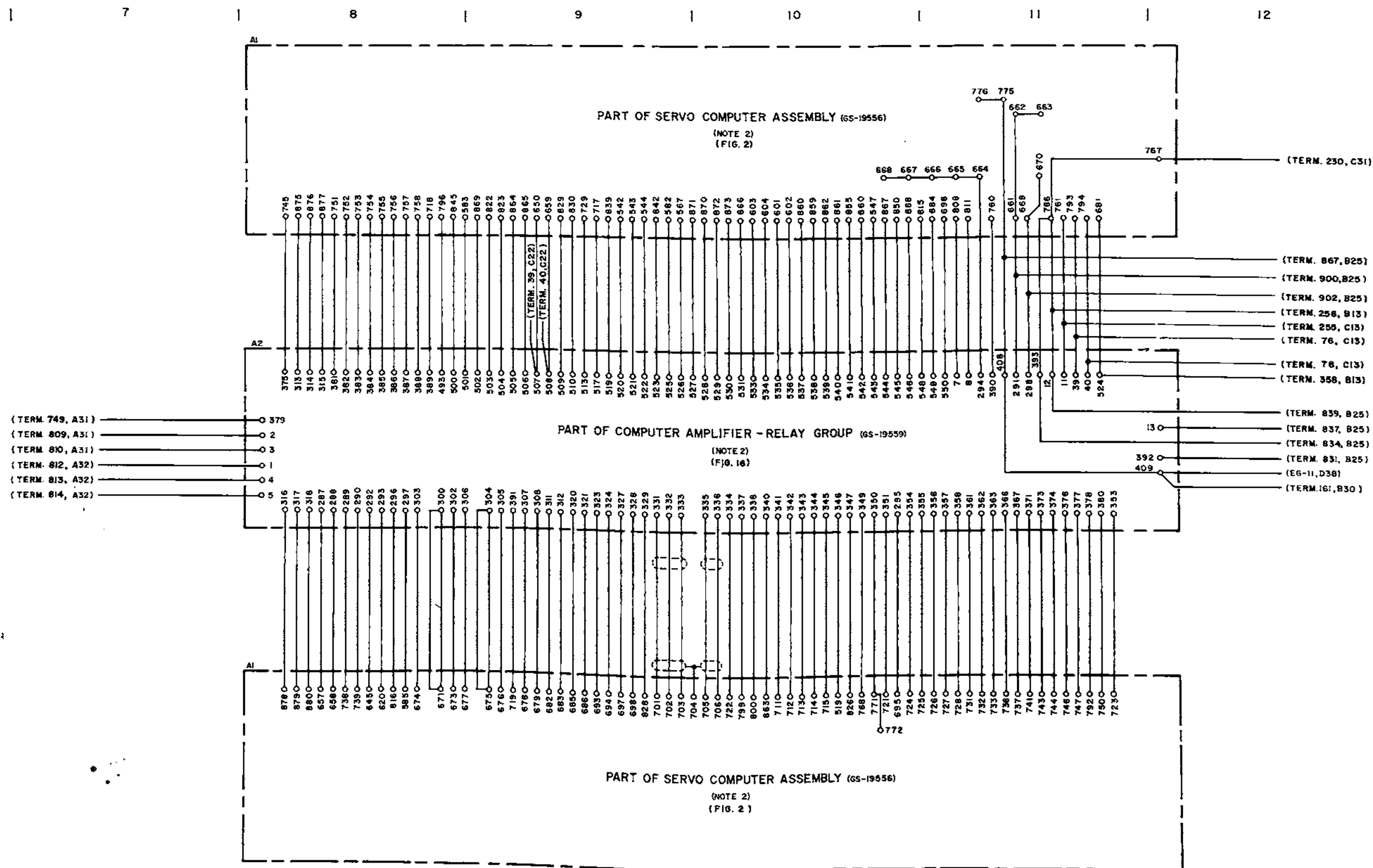
Ref design	Value	Mfr's rating			Type, part, or drawing no.	Remarks
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P15					MS35170	
P16					MS35170	
P17					MS35170	
P19					MS35170	
P19					9144413	
P20					MS35170	
P21					MS35170	
P22					MS35170	
P23					MS35170	
P24					MS35170	
P25					MS35170	
P26					MS35170	
P27					MS35170	
P28					MS35170	
P30					9144413	
P35					9150387	
P36					9144413	
P41					8019387	
P50					9144413	
P54					9144413	
P55					9150387	
P93					MS35170	
P101					MS3106A22-14S	
P131					MS35170	
P134					MS35170	
P137					MS35170	
P201					MS35170	
P203					MS3106A14-5S	
P204					MS35170	
P205					MS3106A22-14P	
P206					MS3106A14S-7P	
S1					7602615	
S4					MS35100-3	
S5	10			125	8019910	
S6					502688	
S9					MS35059-17	
TB6A					8219431	
TB7A					8219432	
TB8A					8219433	
TB8B					8219433	
TB8C					8219433	
TB8D					8219433	
TB8E					8219433	
TB8F					8219433	
TB8G					8219433	
TB8H					8219433	
TB9A					8219433	
TB9B					8219433	

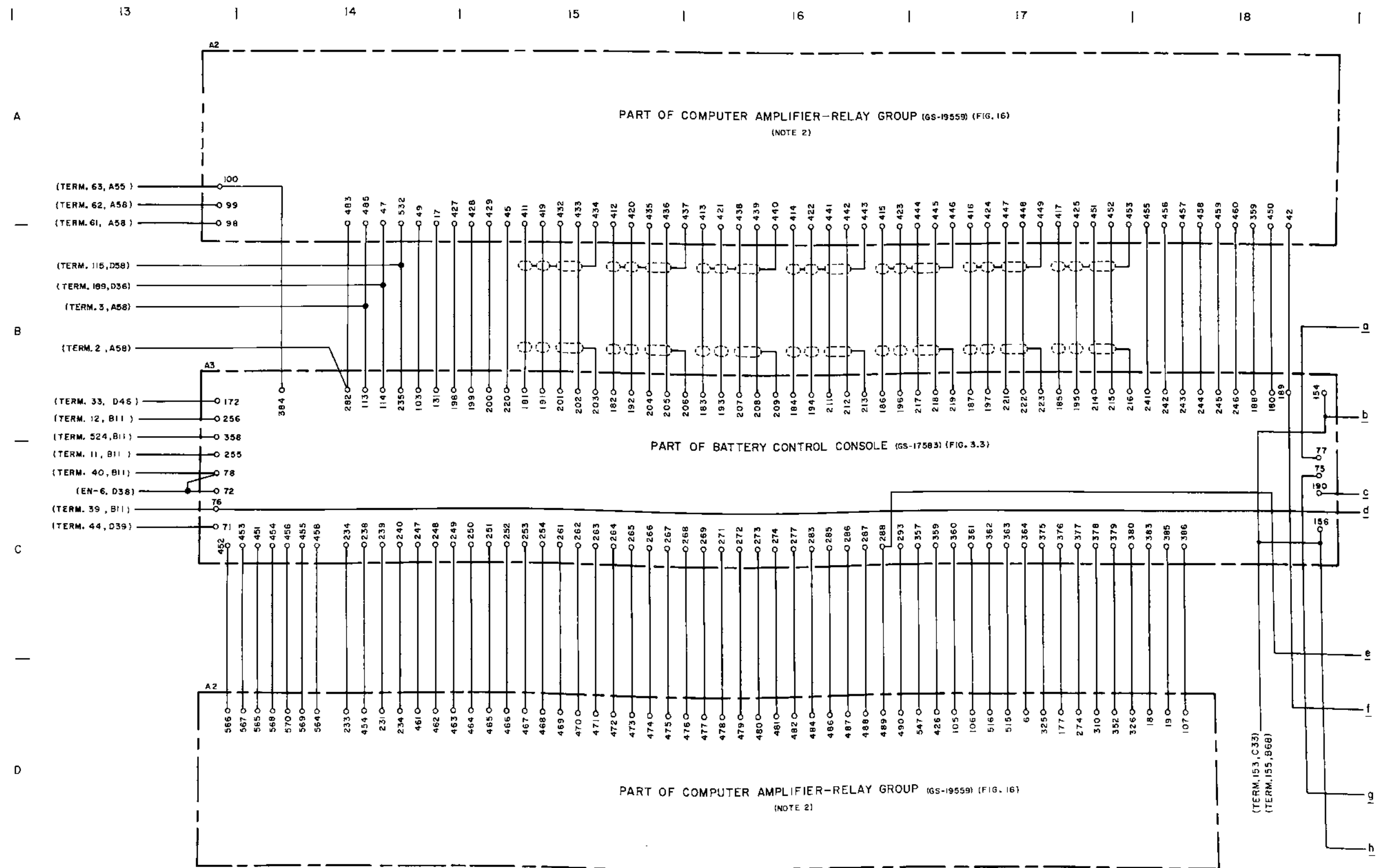
**CONFIDENTIAL**

**CONFIDENTIAL**—Modified Handling  
Authorized

C14



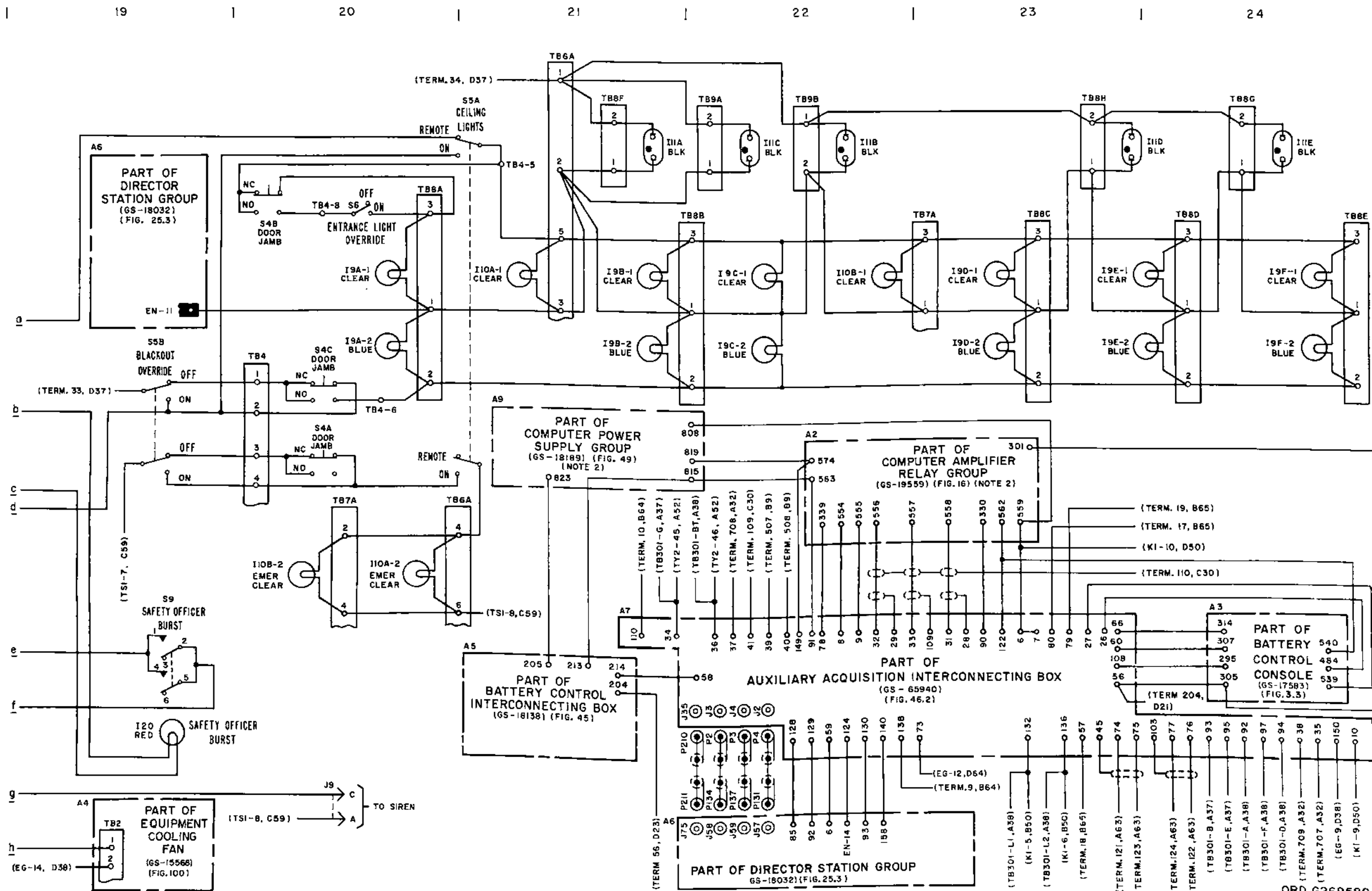




ORD G269588

Figure 2.3 (U). Continued (sheet 3 of 18).

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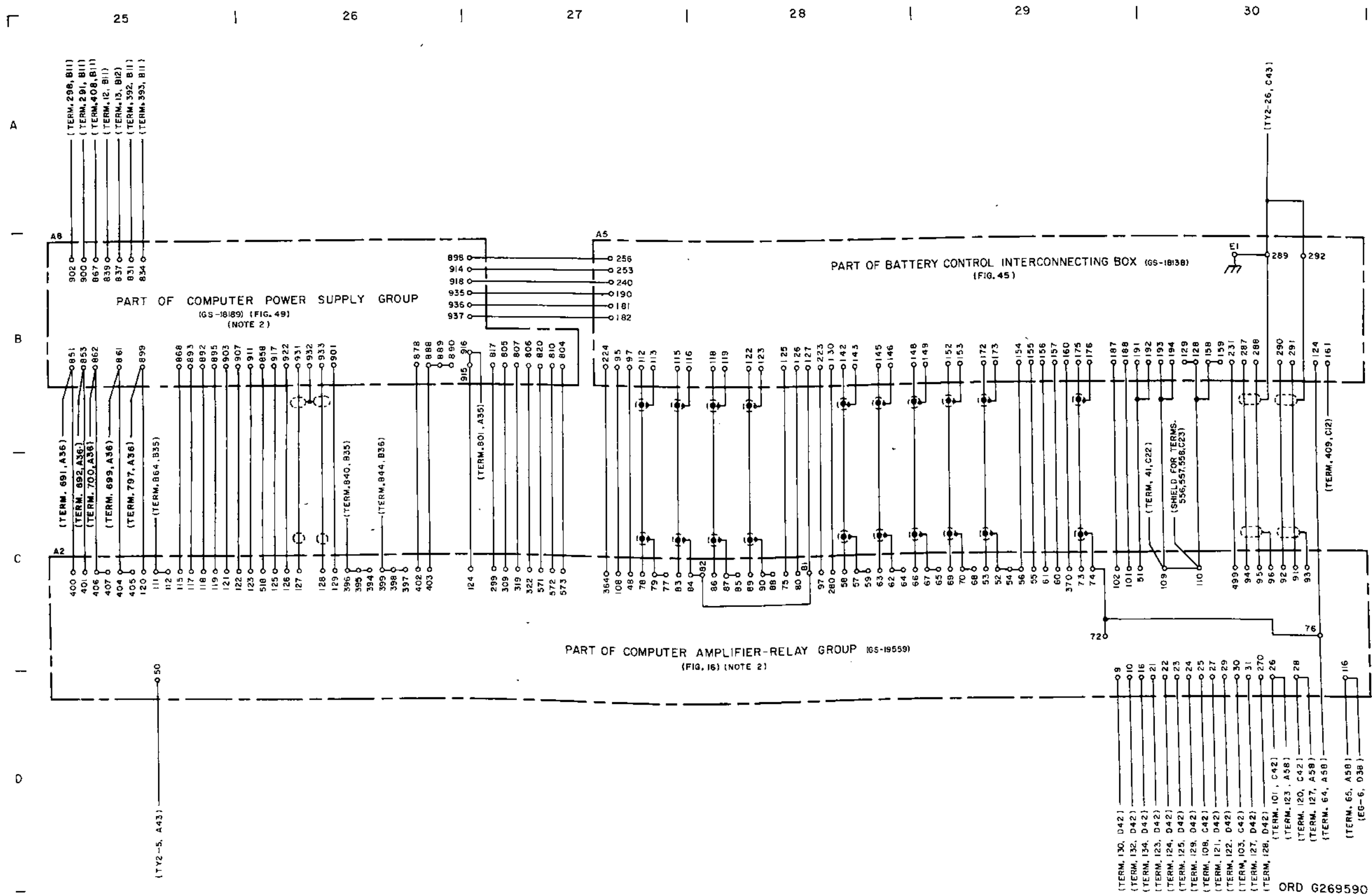
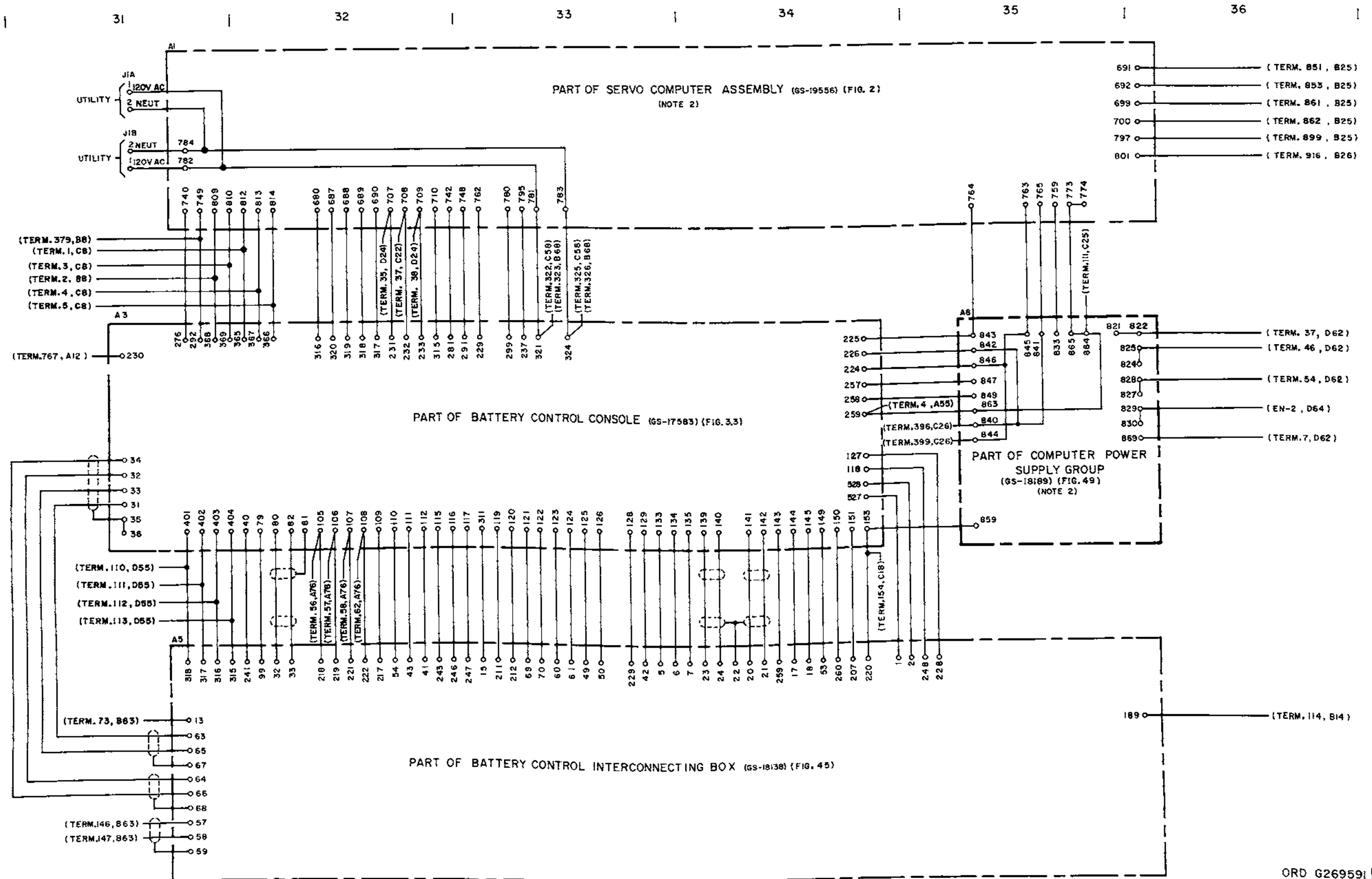


Figure 2.3 (U). Continued (sheet 5 of 18).

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ORD G269591

Figure 2.3 (U). Continued (sheet 6 of 18).

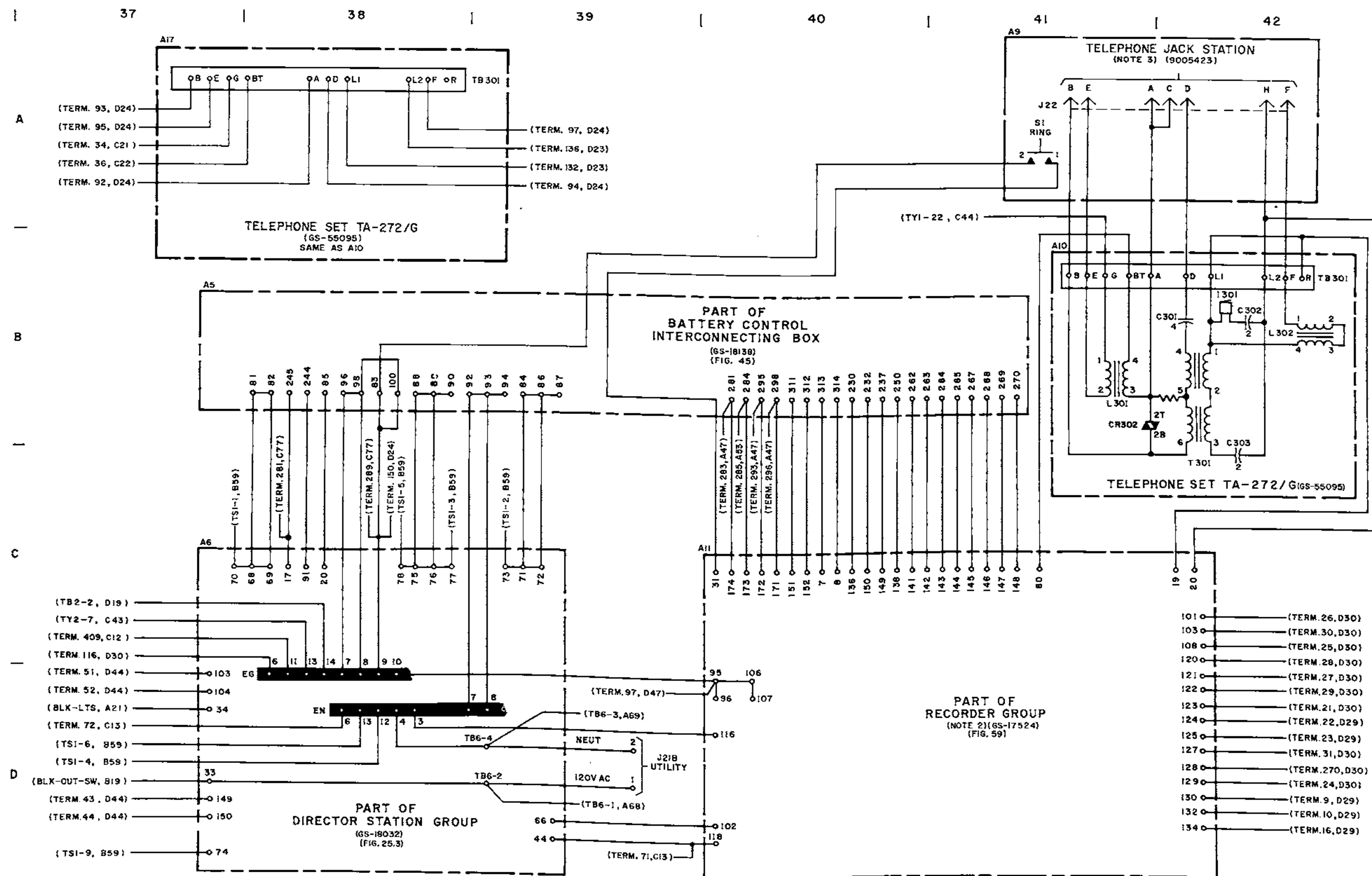


Figure 2.9 (U). Continued (sheet 7 of 18).

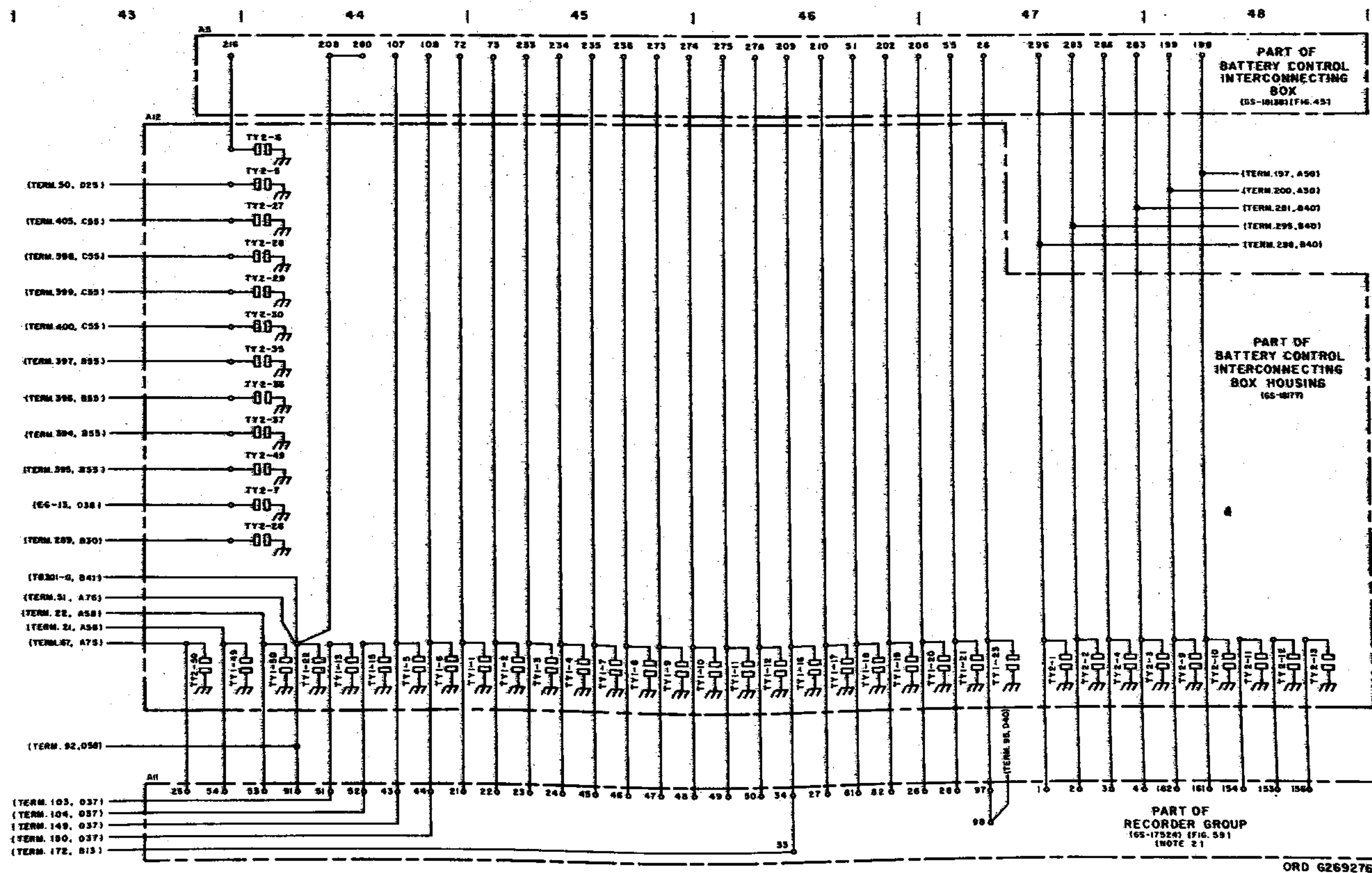


Figure 2.3 (U). Continued (sheet 8 of 18).

CONFIDENTIAL

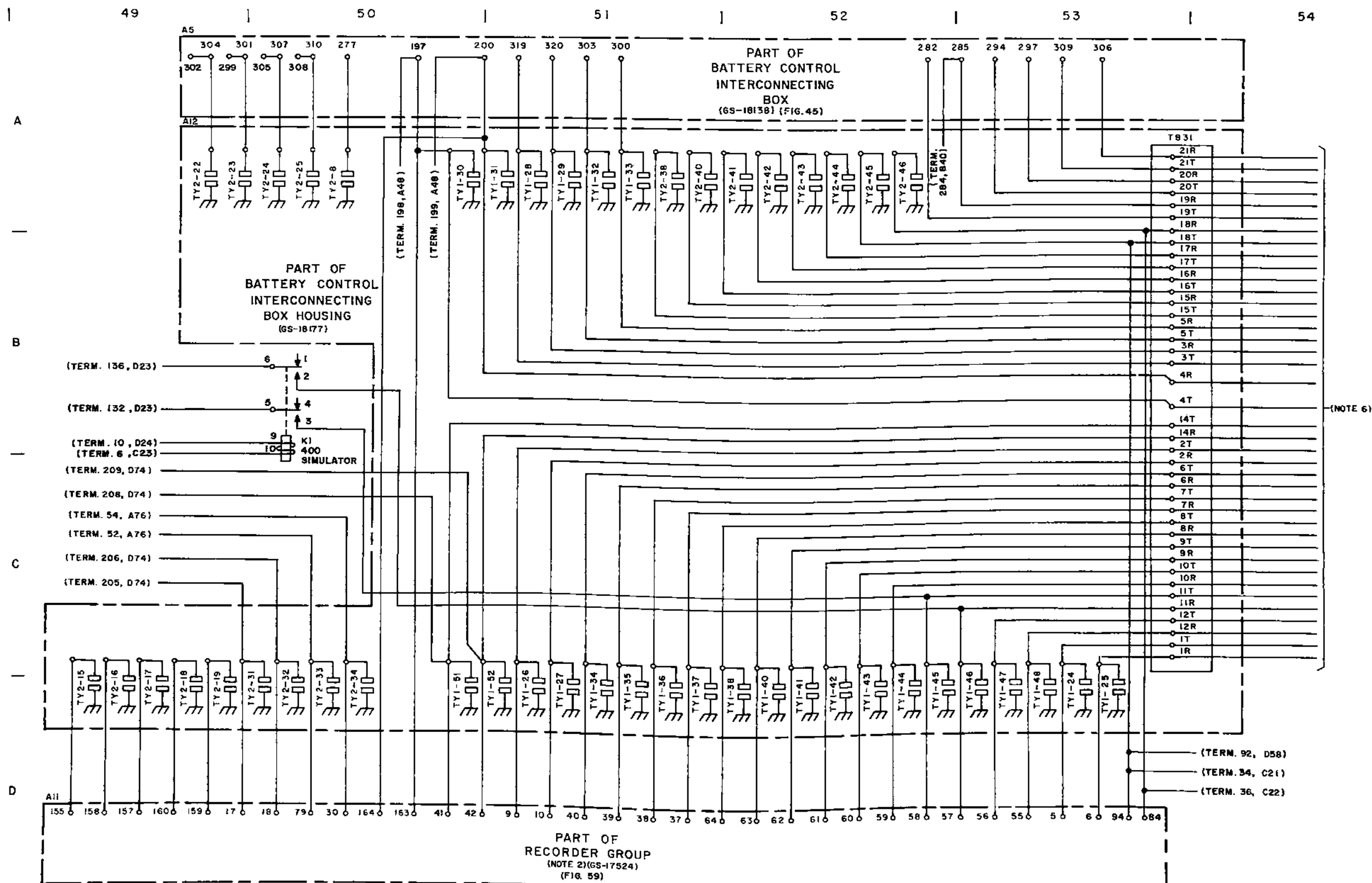


Figure 2.3 (U). Continued (sheet 9 of 18).

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ORD G269183

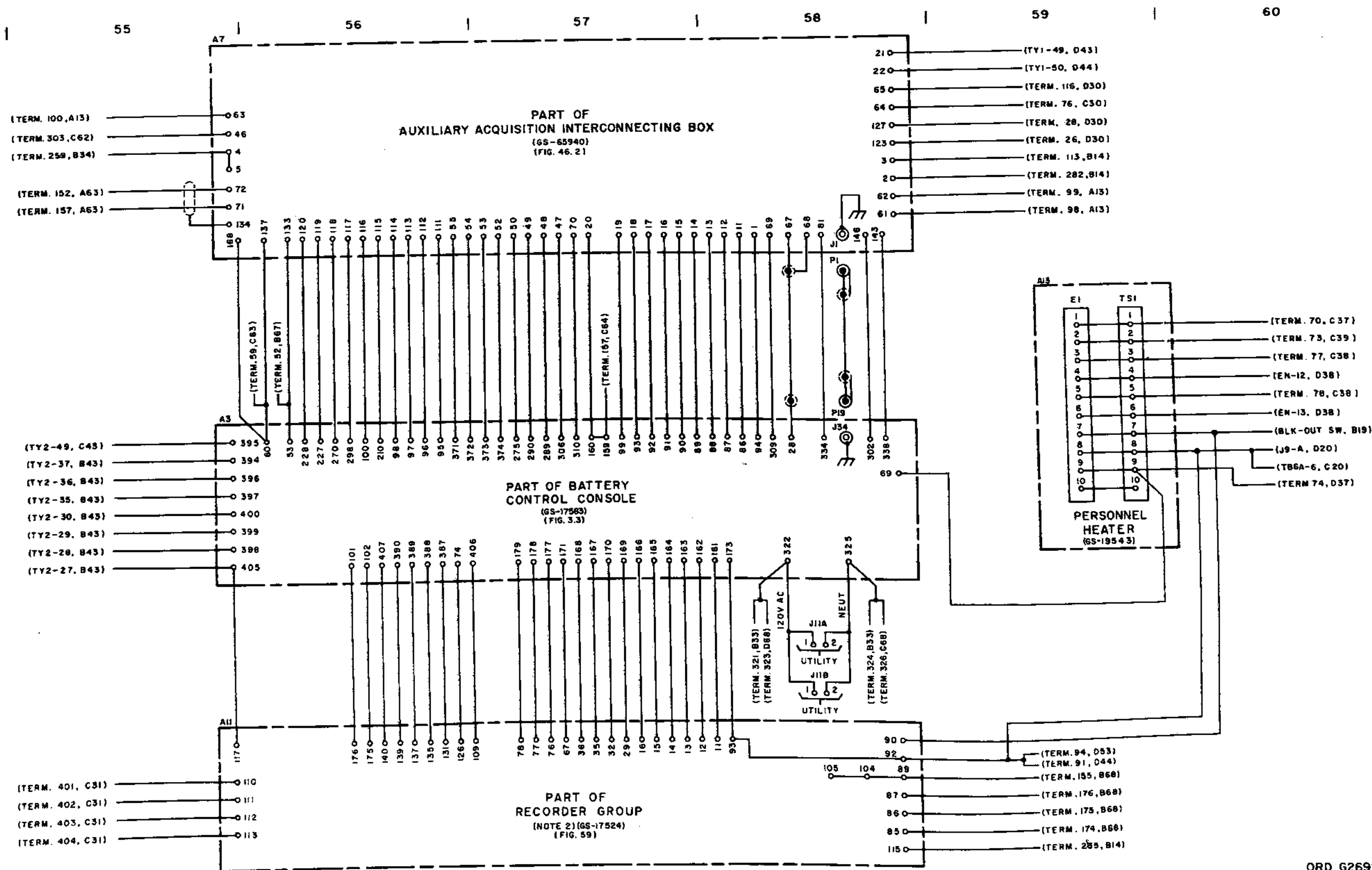
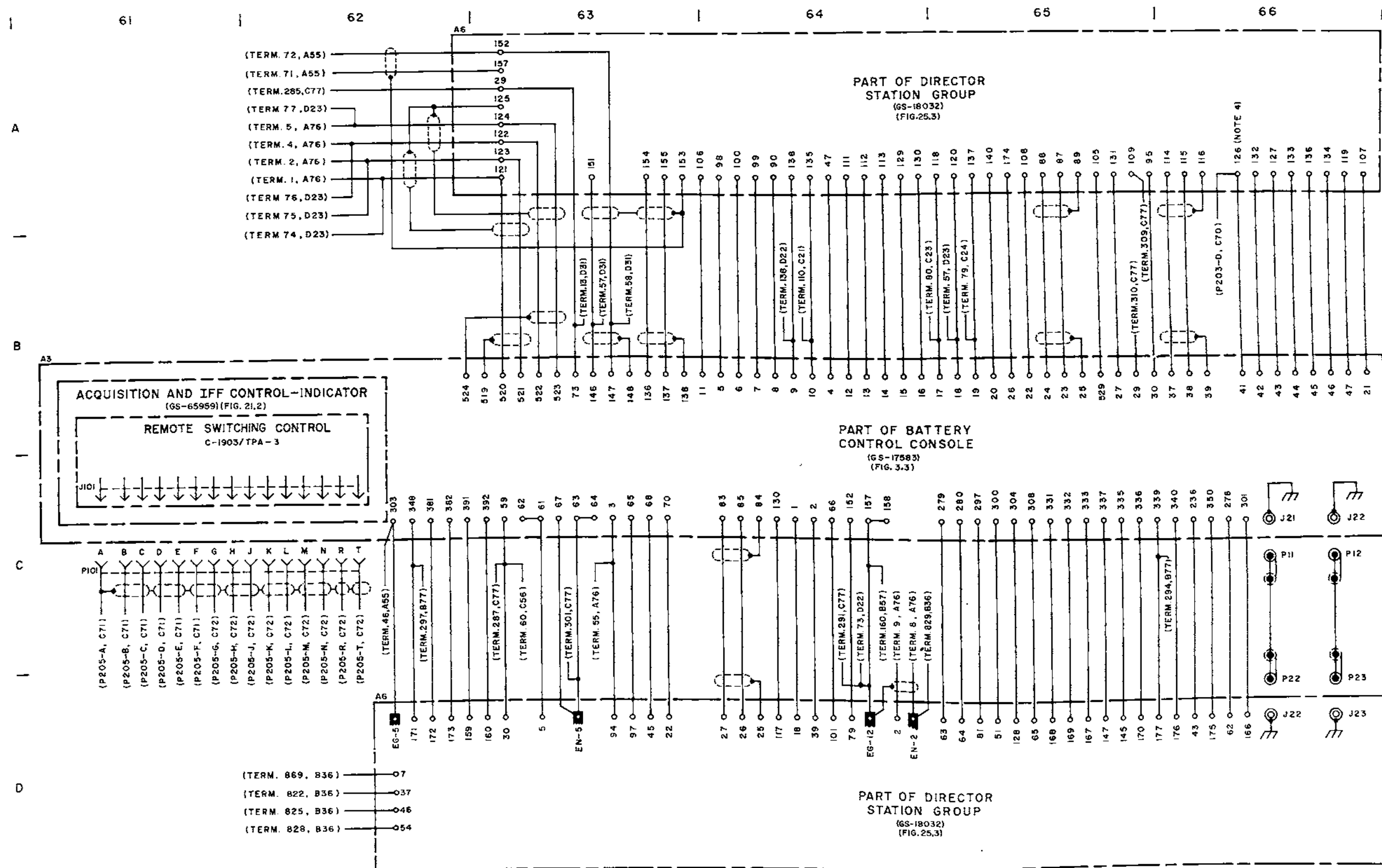


Figure 2.3 (U). Continued (sheet 10 of 18).

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ORD G269250





ORD G269184

Figure 2.3 (U). Continued (sheet 11 of 18).

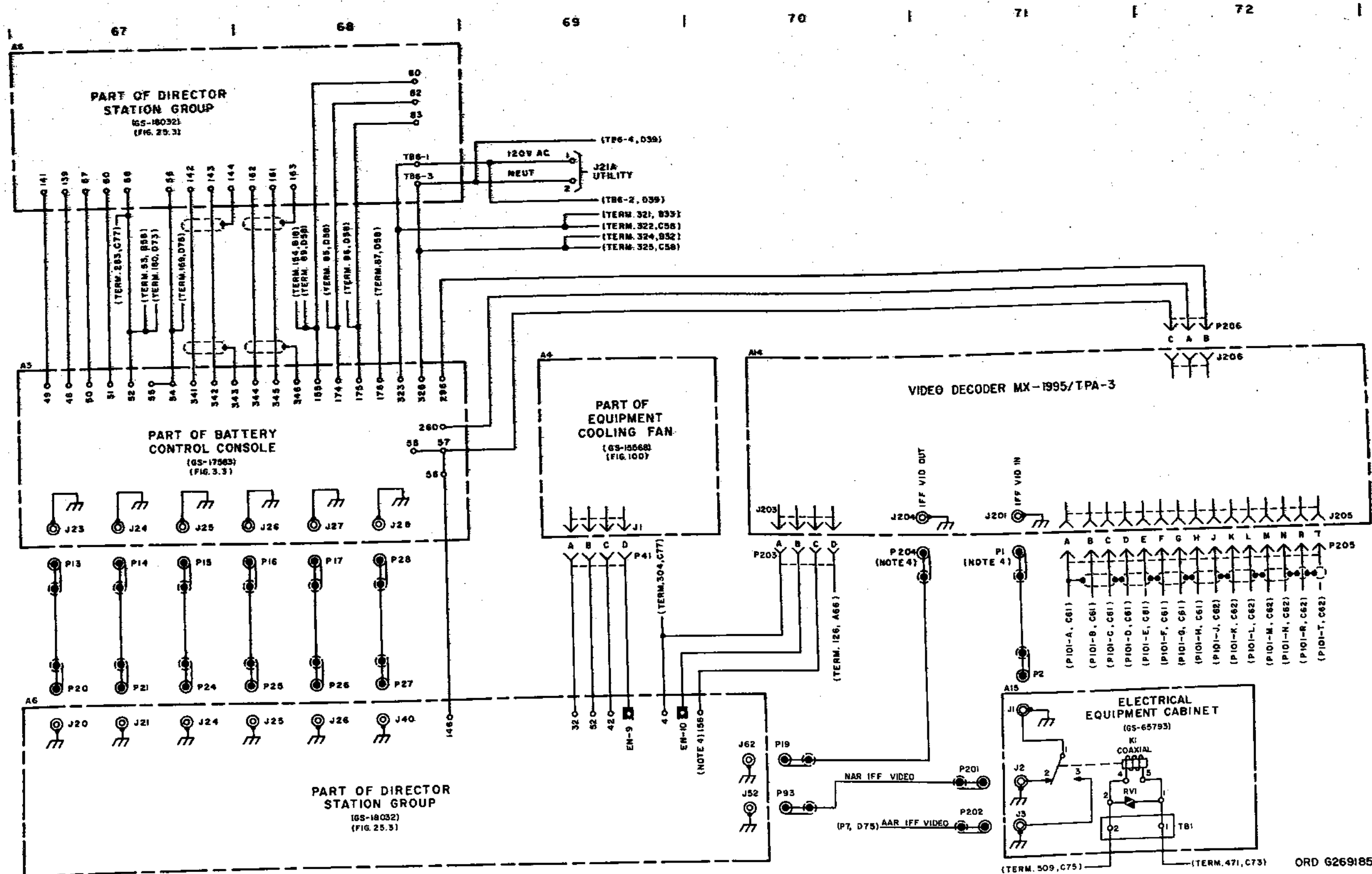


Figure 2.3 (U). Continued (sheet 12 of 18).

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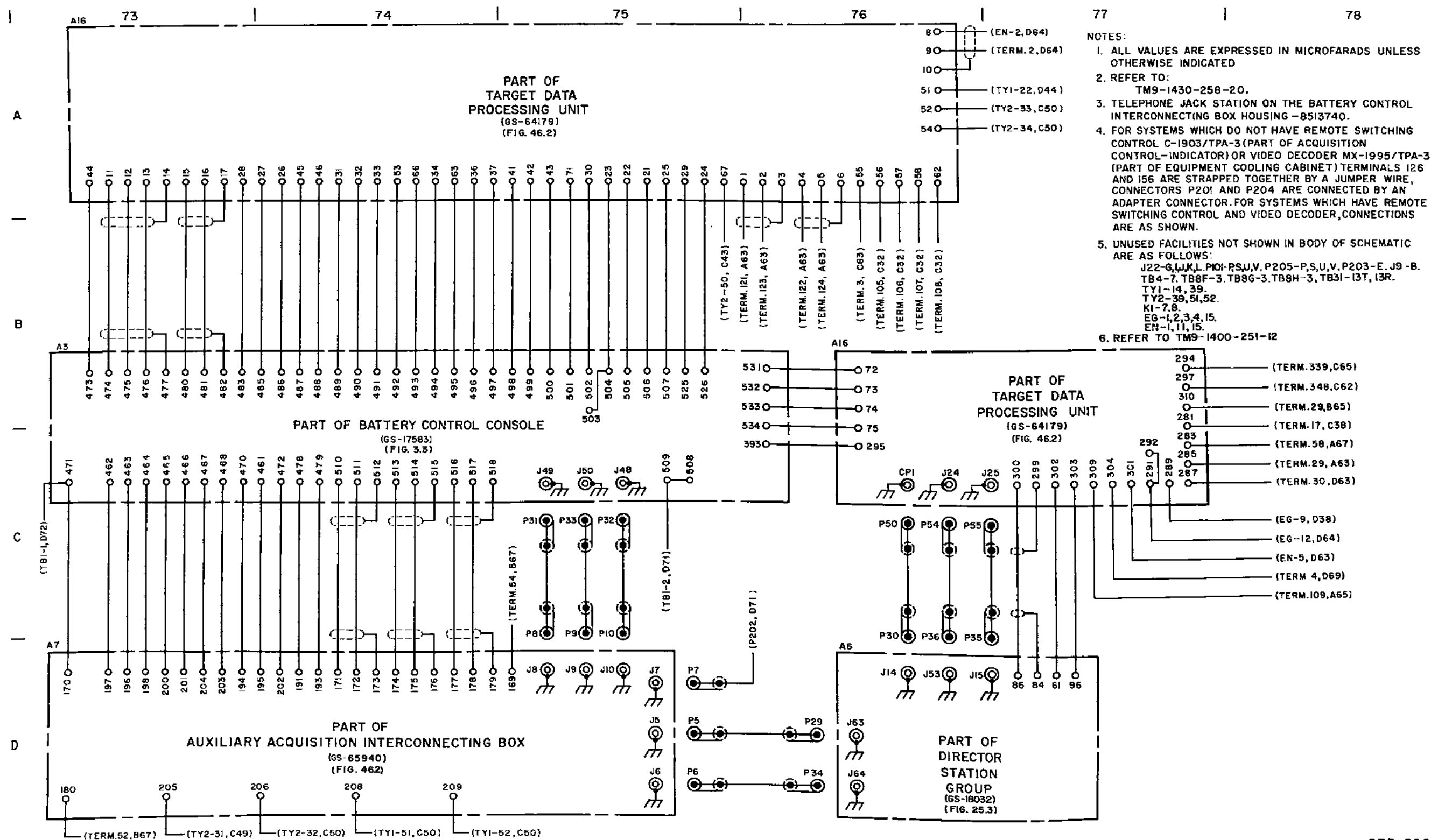


Figure 2.3 (U). Continued (sheet 13 of 18).

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ORD G269186

INDEX OF TERMINALS - COMPUTER AMPLIFIER-RELAY GROUP (FIG. 16\*)

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C8	55	C29	109	C30	163	C4	217	B2	271	B6	325	D17	379	B8	433	A15	487	D16	541	B10		
2	C8	56	C29	110	C30	164	C4	218	B2	272	B6	326	D17	380	C11	434	A15	488	D16	542	B10		
3	C8	57	C28	111	C25	165	C4	219	B2	273	B6	327	C9	381	B8	435	A15	489	D16	543	B10		
4	C8	58	C28	112	C25	166	C4	220	B2	274	D17	328	C9	382	B8	436	A15	490	D16	544	B10		
5	C8	59	C28	113	No Conn	167	C4	221	B3	275	B6	329	C9	383	B8	437	A15	491	No Conn	545	B10		
6	D17	60	C29	114	C2	168	C5	222	B3	276	No Conn	330	No Conn	384	B8	438	A16	492	No Conn	546	B10		
7	B11	61	C29	115	C25	169	C5	223	B3	277	No Conn	331	C9	385	B8	439	A16	493	B8	547	D16		
8	B11	62	C28	116	D30	170	C5	224	B3	278	B6	332	C9	386	B8	440	A16	494	No Conn	548	B10		
9	D29	63	C28	117	C25	171	C5	225	B3	279	B6	333	C9	387	B8	441	A16	495		549	B11		
10	D29	64	C28	118	C25	172	C5	226	B3	280	C28	334	C10	388	B8	442	A16	496		550	B11		
11	B11	65	C29	119	C25	173	C5	227	B3	281	B6	335	C10	389	B8	443	A16	497		551	C22		
12	B11	66	C28	120	C25	174	No Conn	228	B3	282	B6	336	C10	390	B11	444	A16	498	No Conn	552	C22		
13	C11	67	C29	121	C25	175	C5	229	B3	283	B6	337	C10	391	C9	445	A17	499	C30	553	C22		
14	C1	68	C29	122	C25	176	C5	230	B3	284	B6	338	C10	392	C11	446	A17	500	B8	554	C22		
15	C1	69	C29	123	C25	177	D17	231	D14	285	B4	339	No Conn	393	B11	447	A17	501	B8	555	C22		
16	D29	70	C29	124	C26	178	C5	232	B3	286	B4	340	C10	394	C26	448	A17	502	B9	556	C22		
17	A14	71	No Conn	125	C26	179	C5	233	D14	287	C8	341	C10	395	C26	449	A17	503	B9	557	C23		
18	D17	72	C29	126	C26	180	C5	234	D14	288	C8	342	C10	396	C26	450	A18	504	B9	558	C23		
19	D18	73	C29	127	C26	181	C5	235	B3	289	C8	343	C10	397	C26	451	A17	505	B9	559	C23		
20	C1	74	C29	128	C26	182	C5	236	B3	290	C8	344	C10	398	C26	452	A17	506	B9	560	C23		
21	D30	75	C28	129	C26	183	C5	237	B3	291	B11	345	C10	399	C26	453	A17	507	B9	561	C23		
22	D30	76	C30	130	C2	184	C5	238	B3	292	C8	346	C10	400	C25	454	D14	508	B9	562	C23		
23	D30	77	C27	131	C2	185	C6	239	B3	293	C8	347	C10	401	C25	455	A18	509	B9	563	D14		
24	D30	78	C27	132	C2	186	C6	240	B4	294	B11	348	No Conn	402	C26	456	A18	510	B9	564	D14		
25	D30	79	C27	133	C2	187	C6	241	B4	295	C10	349	C10	403	C26	457	A18	511	No Conn	565	D14		
26	D30	80	C28	134	C2	188	C6	242	B6	296	C8	350	C10	404	C25	458	A18	512	No Conn	566	D13		
27	D30	81	C28	135	C2	189	C6	243	B4	297	C8	351	C10	405	C25	459	A18	513	B9	567	D13		
28	D30	82	C27	136	C2	190	C6	244	B6	298	B11	352	D17	406	C25	460	A18	514	No Conn	568	D14		
29	D30	83	C27	137	C3	191	C6	245	B4	299	No Conn	353	C10	407	C25	461	D14	515	D17	569	D14		
30	D30	84	C27	138	C3	192	C6	246	B4	300	C8	354	C10	408	B11	462	D14	516	D17	570	D14		
31	D30	85	C28	139	C3	193	C6	247	B4	301	No Conn	355	C10	409	C30	463	D14	517	B9	571	No Conn		
32	C1	86	C28	140	C3	194	C6	248	B4	302	C8	356	C11	410	No Conn	464	D14	518	C26	572			
33	C1	87	C28	141	C3	195	C6	249	B4	303	C8	357	C11	411	A15	465	D15	519	B9	573			
34	C1	88	C28	142	C3	196	C6	250	B4	304	C9	358	C11	412	A15	466	D15	520	B9	574			
35	C1	89	C28	143	C3	197	B5	251	B4	305	C9	359	A18	413	A16	467	D15	521	B9	575			
36	C1	90	C28	144	C3	198	B5	252	B4	306	C8	360	No Conn	414	A16	468	D15	522	B9	576			
37	C1	91	C30	145	C3	199	B1	253	B4	307	C9	361	C11	415	A16	469	D15	523	B9	577			
38	C2	92	C30	146	C3	200	B1	254	B4	308	C9	362	C11	416	A17	470	D15	524	B11	578			
39	B11	93	C30	147	C3	201	B1	255	B5	309	No Conn	363	C11	417	A17	471	D15	525	B9	579			
40	B11	94	C30	148	C3	202	B1	256	B5	310	D17	364	No Conn	418	No Conn	472	D15	526	B9	580	No Conn		
41	C2	95	C30	149	C3	203	B1	257	B5	311	C9	365	No Conn	419	A15	473	D15	527	B9				
42	A18	96	C30	150	C3	204	B1	258	B5	312	C9	366	C11	420	A15	474	D15	528	B10				
43	C2	97	C28	151	C3	205	B1	259	B5	313	B8	367	C11	421	A16	475	D15	529	B10				
44	C2	98	A13	152	C3	206	B2	260	B5	314	B8	368	No Conn	422	A16	476	D15	530	B10				
45	A15	99	A13	153	C4	207	B2	261	B5	315	B8	369	No Conn	423	A16	477	D16	531	B10				
46	C2	100	A13	154	C4	208	B2	262	B1	316	B8	370	C29	424	A17	478	D16	532	A14				
47	A14	101	C29	155	C4	209	B2	263	B5	317	B8	371	C11	425	A17	479	D16	533	B10				
48	C27	102	C29	156	C4	210	B2	264	B1	318	B8	372	No Conn	426	D17	480	D16	534	B10				
49	A14	103	C2	157	C4	211	B2	265	B5	319	No Conn	373	C11	427	A14	481	D16	535	B10				
50	D25	104	C2	158	C4	212	B2	266	B5	320	C9	374	C11	428	A15	482	D16	536	B10				
51	C29	105	D17	159	C4	213	B2	267	B5	321	C9	375	B8	429	A15	483	A14	537	B10				
52	C29	106	D17	160	C4	214	B2	268	B5	322	No Conn	376	C11	430	No Conn	484	D16	538	B10				
53	C29	107	D18	161	C4	215	B2	269	B5	323	C9	377	C11	431	No Conn	485	A14	539	B10				
54	C29	108	C27	162	C4	216	B2	270	D30	324	C9	378	C11	432	A15	486	D16	540	B10				

Figure 2.3 (U). Continued (sheet 14 of 18).

INDEX OF TERMINALS—SERVO COMPUTER ASSEMBLY (FIG. 2*)														INDEX OF TERMINALS—COMPUTER POWER SUPPLY GROUP (FIG. 49*)							
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
501	D2	555	D6	609	A3	663	A11	717	B9	771	D10	825	D3	879	D8	801	No Conn	855	No Conn	909	No Conn
502	D2	556	D6	610	No Conn	664	A11	718	B8	772	B10	826	D10	880	D8	802	↑	856	No Conn	910	No Conn
503	D2	557	D6	611	A4	665	A11	719	D9	773	A35	827	A1			803	↑	857	No Conn	911	B25
504	D2	558	D6	612	A6	666	A11	720	D1	774	A35	828	D9			804	↑	858	B26	912	No Conn
505	D2	559	D6	613	A4	667	A10	721	D10	775	A11	829	B9			805	↑	859	No Conn	913	No Conn
506	D2	560	D6	614	A6	668	A10	722	D10	776	A11	830	B9			806	↑	860	No Conn	914	B26
507	D3	561	D6	615	A4	669	B11	723	D10	777	D2	831	A6			807	↑	861	B25	915	B26
508	D3	562	D6	616	A4	670	A11	724	D10	778	No Conn	832	A3			808	↑	862	B25	916	B26
509	D3	563	D6	617	A4	671	D8	725	D10	779	D2	833	A2			809	↑	863	B35	917	B26
510	D3	564	D6	618	A4	672	No Conn	726	D11	780	A33	834	A5			810	↑	864	B35	918	B26
511	D3	565	D6	619	No Conn	673	D8	727	D11	781	A32	835	No Conn			811	↑	865	B35	919	No Conn
512	D3	566	A2	620	D8	674	D8	728	D11	782	A31	836	A2			812	↑	866	No Conn	920	No Conn
513	D3	567	B9	621	A4	675	D9	729	B9	783	A32	837	A1			813	↑	867	B25	921	No Conn
514	D3	568	No Conn	622	A4	676	D9	730	A1	784	A31	838	A4			814	↑	868	B25	922	B26
515	D3	569	No Conn	623	A4	677	D8	731	D11	785	No Conn	839	B9			815	↑	869	B36	923	No Conn
516	D3	570	A4	624	A4	678	D9	732	D11	786	↑	840	D2			816	↑	870	No Conn	924	↑
517	D3	571	D1	625	A5	679	D9	733	D11	787	↑	841	D2			817	↑	871	↑	925	↑
518	D3	572	A1	626	A5	680	A32	734	A1	788	↓	842	B9			818	↑	872	↑	926	↑
519	D10	573	A1	627	A5	681	B11	735	D2	789	↓	843	No Conn			819	↓	873	↑	927	↑
520	D3	574	D2	628	A5	682	D9	736	D11	790	No Conn	844	No Conn			820	No Conn	874	↑	928	↑
521	D3	575	A1	629	No Conn	683	D9	737	D11	791	D2	845	B8			821	B36	875	↑	929	↑
522	D4	576	A1	630	No Conn	684	B11	738	D8	792	D11	846	No Conn			822	B35	876	↓	930	No Conn
523	D4	577	A2	631	A5	685	D9	739	D8	793	B11	847	A2			823	No Conn	877	No Conn	931	B26
524	A2	578	A2	632	A1	686	D9	740	A31	794	B11	848	D6			824	B36	878	B26	932	B26
525	D4	579	A2	633	A5	687	A32	741	D11	795	A33	849	A4			825	B36	879	No Conn	933	B26
526	D4	580	No Conn	634	A1	688	A32	742	A33	796	B8	850	B10			826	No Conn	880	↑	934	No Conn
527	D4	581	A2	635	A5	689	A32	743	D11	797	A36	851	No Conn			827	B36	881	↑	935	B26
528	D4	582	B9	636	A5	690	A32	744	D11	798	No Conn	852	↑			828	B36	882	↑	936	B26
529	D4	583	B9	637	A5	691	A36	745	A8	799	D10	853	↑			829	B36	883	↑	937	B26
530	D4	584	A2	638	A5	692	A36	746	D11	800	D10	854	No Conn			830	B36	884	↑	938	No Conn
531	D4	585	D8	639	No Conn	693	D9	747	D11	801	A35	855	B10			831	B25	885	↑	939	No Conn
532	D4	586	A2	640	No Conn	694	D9	748	A33	802	D1	856	No Conn			832	No Conn	886	↓	940	No Conn
533	D4	587	A2	641	A6	695	D11	749	A31	803	A1	857	A6			833	B35	887	No Conn		
534	D4	588	A2	642	No Conn	696	B11	750	D11	804	D1	858	No Conn			834	B25	888	B26		
535	D4	589	A2	643	D4	697	D9	751	B8	805	D1	859	B10			835	No Conn	889	B26		
536	D4	590	No Conn	644	D5	698	D9	752	B8	806	D1	860	B10			836	No Conn	890	B26		
537	D4	591	A3	645	D8	699	A36	753	B8	807	D2	861	B10			837	B25	891	No Conn		
538	D5	592	A3	646	A5	700	A36	754	B8	808	B11	862	B10			838	No Conn	892	B25		
539	D5	593	A3	647	A5	701	D9	755	B8	809	A31	863	D10			839	B25	893	B25		
540	D5	594	A3	648	A6	702	D9	756	B8	810	A31	864	B9			840	B35	894	No Conn		
541	D5	595	A3	649	A6	703	D9	757	B8	811	B11	865	B9			841	B35	895	B25		
542	B9	596	A3	650	B9	704	D10	758	B8	812	A32	866	B10			842	B35	896	No Conn		
543	B9	597	A3	651	A6	705	D10	759	A35	813	A32	867	B10			843	B35	897	No Conn		
544	B9	598	A3	652	A6	706	D10	760	B11	814	A32	868	B10			844	B35	898	B26		
545	D5	599	A3	653	A6	707	A32	761	B11	815	B11	869	B9			845	B35	899	B25		
546	D5	600	D5	654	A6	708	A32	762	A33	816	D8	870	B10			846	B35	900	B25		
547	B10	601	B10	655	A6	709	A32	763	A35	817	A1	871	B9			847	B35	901	B26		
548	D5	602	B10	656	A8	710	A32	764	A35	818	D2	872	B10			848	No Conn	902	B25		
549	D5	603	B10	657	D8	711	D10	765	A35	819	A3	873	B10			849	B35	903	B25		
550	D5	604	B10	658	D8	712	D10	766	B11	820	A1	874	D1			850	No Conn	904	No Conn		
551	D5	605	A3	659	B9	713	D10	767	A33	821	A6	875	A8			851	B25	905	No Conn		
552	D5	606	A3	660	B10	714	D10	768	D10	822	B9	876	A8			852	No Conn	906	No Conn		
553	D5	607	A3	661	B11	715	D10	769	No Conn	823	B9	877	A8			853	B25	907	B25		
554	D5	608	A3	662	A11	716	No Conn	770	No Conn	824	D1	878	D8			854	No Conn	908	No Conn		

Figure 2.3 (U). Continued (sheet 15 of 18).

INDEX OF TERMINALS - BATTERY CONTROL INTERCONNECTING BOX												INDEX OF TERMINALS - BATTERY CONTROL INTERCONNECTING BOX HOUSING						INDEX OF TERMINALS - AUXILIARY ACQUISITION INTERCONNECTING BOX							
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C34	55	A47	109	No Conn	163	No Conn	217	C32	271	No Conn	TB31-1T	B53	TY1-13	D44	TY2-15	D49	1	B58	55	B56	109	No Conn	174	D74
2	C34	56	No Conn	110	No Conn	164	No Conn	218	C32	272	No Conn	-1R	B53	-14	No Conn	-16	D49	2	A58	56	D23	110	D23	175	D74
3	No Conn	57	D31	111	No Conn	165	No Conn	219	C32	273	A45	-2T	B53	-15	D44	-17	D49	3	A58	57	D23	111	B56	176	D74
4	No Conn	58	D31	112	B27	166	No Conn	220	C34	274	A45	-2R	C53	-16	D46	-18	D49	4	A55	58	D22	112	B56	177	D74
5	C33	59	D31	113	B27	167	No Conn	221	C32	275	A46	-3T	B53	-17	D46	-19	D49	5	A55	59	D22	113	B56	178	D74
6	C33	60	C33	114	No Conn	168	No Conn	222	C32	276	A46	-3R	B53	-18	D46	-20	No Conn	6	C23	60	C23	114	B56	179	D74
7	C34	61	C33	115	B27	169	No Conn	223	B28	277	A50	-4T	B53	-19	D46	-21	No Conn	7	No Conn	61	B58	115	B56	180	D73
8	No Conn	62	No Conn	116	B27	170	No Conn	224	No Conn	278	No Conn	-4R	B53	-20	D47	-22	A49	8	C22	62	A58	116	B56	181	No Conn
9	No Conn	63	D31	117	No Conn	171	No Conn	225	No Conn	279	No Conn	-5T	B53	-21	D47	-23	A49	9	C22	63	B58	117	B56	182	No Conn
10	No Conn	64	D31	118	B28	172	B29	226	No Conn	280	A44	-5R	B53	-22	D44	-24	A50	10	C23	64	A58	118	B56	183	No Conn
11	No Conn	65	D31	119	B28	173	B29	227	No Conn	281	B40	-6T	C53	-23	D47	-25	A50	11	B58	65	A58	119	B56	184	No Conn
12	No Conn	66	D31	120	No Conn	174	No Conn	228	C35	282	A52	-6R	C53	-24	D53	-26	C44	12	B58	66	C23	120	B56	185	No Conn
13	D31	67	D31	121	No Conn	175	B29	229	C33	283	A47	-7T	C53	-25	D53	-27	A44	13	B57	67	B58	121	No Conn	186	No Conn
14	No Conn	68	D31	122	B28	176	B29	230	B40	284	B40	-7R	C53	-26	D51	-28	B44	14	B57	68	B58	122	C23	187	No Conn
15	C34	69	C33	123	B28	177	No Conn	231	B30	285	A53	-8T	C53	-27	D51	-29	B44	15	B57	69	B58	123	A58	188	No Conn
16	No Conn	70	C33	124	B30	178	No Conn	232	B40	286	A47	-8R	C53	-28	A51	-30	B44	16	B57	70	B57	124	D22	189	No Conn
17	C34	71	No Conn	125	B28	179	No Conn	233	A45	287	B30	-9T	C53	-29	A51	-31	D49	17	B57	71	A55	125	No Conn	190	No Conn
18	C34	72	A44	126	B28	180	No Conn	234	A45	288	B30	-9R	C53	-30	A50	-32	D50	18	B57	72	A55	126	No Conn	191	D74
19	No Conn	73	A45	127	B28	181	B27	235	A45	289	B30	-10T	C53	-31	A50	-33	D50	19	B57	73	D22	127	A58	192	No Conn
20	C34	74	No Conn	128	B30	182	B27	236	A45	290	B30	-10R	C53	-32	A51	-34	D50	20	B57	74	D23	128	D22	193	D74
21	C34	75	No Conn	129	B30	183	No Conn	237	B40	291	B30	-11T	C53	-33	A51	-35	B44	21	A58	75	D23	129	D22	194	D73
22	C34	76	No Conn	130	B28	184	No Conn	238	No Conn	292	B30	-11R	C53	-34	D51	-36	B44	22	A58	76	D24	130	D22	195	D73
23	C34	77	No Conn	131	No Conn	185	No Conn	239	No Conn	293	A47	-12T	C53	-35	D51	-37	C44	23	No Conn	77	D23	131	No Conn	196	D73
24	C34	78	No Conn	132	No Conn	186	No Conn	240	B27	294	A53	-12R	C53	-36	D51	-38	A51	24	No Conn	78	C22	132	No Conn	197	D73
25	No Conn	79	No Conn	133	No Conn	187	B29	241	C31	295	B40	-13T	No Conn	-37	D51	-39	No Conn	25	No Conn	79	C23	133	B56	198	D73
26	A47	80	No Conn	134	No Conn	188	B29	242	No Conn	296	A47	-13R	No Conn	-38	D51	-40	A51	26	C23	80	C23	134	A55	199	No Conn
27	No Conn	81	B38	135	No Conn	189	D36	243	C32	297	A53	-14T	C53	-39	No Conn	-41	A51	27	C23	81	No Conn	135	No Conn	200	D73
28	No Conn	82	B38	136	No Conn	190	B27	244	B38	298	B40	-14R	C53	-40	D52	-42	A52	28	No Conn	82	No Conn	136	No Conn	201	D73
29	No Conn	83	B38	137	No Conn	191	B29	245	B38	299	No Conn	-15T	B53	-41	D52	-43	A52	29	No Conn	83	No Conn	137	B56	202	D74
30	No Conn	84	B39	138	No Conn	192	B30	246	C32	300	A51	-15R	B53	-42	D52	-44	A52	30	No Conn	84	No Conn	138	D22	203	D73
31	No Conn	85	B38	139	No Conn	193	B30	247	C32	301	A49	-16T	B53	-43	D52	-45	A52	31	C23	85	No Conn	139	No Conn	204	D73
32	C32	86	B39	140	No Conn	194	B30	248	C35	302	No Conn	-16R	B53	-44	D52	-46	A52	32	C23	86	No Conn	140	D22	205	D73
33	C32	87	B39	141	No Conn	195	No Conn	249	No Conn	303	A51	-17T	B53	-45	D52	-47	No Conn	33	C23	87	No Conn	141	No Conn	206	D73
34	No Conn	88	B38	142	B28	196	No Conn	250	B40	304	A49	-17R	B53	-46	D52	-48	No Conn	34	C22	88	No Conn	142	No Conn	207	No Conn
35	No Conn	89	B38	143	B28	197	A50	251	No Conn	305	No Conn	-18T	A53	-47	D53	-49	C44	35	C22	89	No Conn	143	No Conn	208	D74
36	No Conn	90	B38	144	No Conn	198	A48	252	No Conn	306	A53	-18R	A53	-48	D53	-50	D43	36	C22	90	No Conn	144	No Conn	209	D74
37	No Conn	91	No Conn	145	B28	199	A48	253	B27	307	A50	-19T	A53	-49	D43	-51	No Conn	37	C22	91	No Conn	145	No Conn	210	No Conn
38	No Conn	92	B38	146	B28	200	A50	254	No Conn	308	No Conn	-19R	A53	-50	D44	-52	No Conn	38	C22	92	No Conn	146	B58		
39	No Conn	93	B39	147	No Conn	201	No Conn	255	No Conn	309	A53	-20T	A53	-51	D53			39	C22	93	No Conn	147	No Conn		
40	No Conn	94	B39	148	B28	202	A46	256	B27	310	A50	-20R	A53	-52	D53			40	C22	94	No Conn	148	No Conn		
41	C32	95	B27	149	B29	203	No Conn	257	No Conn	311	B40	-21T	A53	TY2-1	D47			41	C22	95	No Conn	149	No Conn		
42	C33	96	B38	150	No Conn	204	C21	258	No Conn	312	B40	-21R	A53	-2	D47			42	D23	96	No Conn	150	D23		
43	C32	97	B27	151	No Conn	205	No Conn	259	C34	313	B40	TY1-1	D44	-3	D47			43	D23	97	No Conn	151	No Conn		
44	No Conn	98	B38	152	B29	206	A46	260	C34	314	B40	-2	D45	-4	D47			44	No Conn	98	No Conn	152	No Conn		
45	No Conn	99	C32	153	B29	207	C34	261	No Conn	315	C31	-3	D45	-5	A44			45	D23	99	No Conn	153	No Conn		
46	No Conn	100	B18	154	B29	208	A44	262	B40	316	C31	-4	D45	-6	A44			46	A55	100	No Conn	154	No Conn		
47	No Conn	101	No Conn	155	B29	209	A46	263	B40	317	C31	-5	D44	-7	C44			47	B57	101	No Conn	155	No Conn		
48	No Conn	102	No Conn	156	B29	210	A46	264	B41	318	C31	-6	D44	-8	A50			48	B57	102	No Conn	156	No Conn		
49	C33	103	No Conn	157	B29	211	C33	265	B41	319	A51	-7	D45	-9	D48			49	B57	103	D23	157	B55		
50	C33	104	No Conn	158	B30	212	C33	266	No Conn	320	A51	-8	D45	-10	D48			50	B57	104	No Conn	158	No Conn		
51	A46	105	No Conn	159	B30	213	No Conn	267	B41			-9	D45	-11	D48			51	No Conn	105	No Conn	159	No Conn		
52	No Conn	106	No Conn	160	B29	214	C21	268	B41			-10	D46	-12	D48			52	B57	106	No Conn	160	No Conn		
53	C34	107	A44	161	B30	215	No Conn	269	B41			-11	D46	-13	D48			53	B57	107	No Conn	161	No Conn		
54	C32	108	A44	162	A43	216	A43	270	B41			-12	D46	-14	No Conn			54	B56	108	D23	162	D74		

Figure 2.3 (U). Continued (sheet 16 of 18).

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**INDEX OF TERMINALS - BATTERY CONTROL CONSOLE (WITH AAR AND AJD)**

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C64	55	B67	109	C32	163	C57	217	B16	271	C16	325	C58	379	C17	471	C73	525	B75
2	C64	56	C68	110	C32	164	C57	218	B17	272	C16	326	B68	380	C17	472	C74	526	B75
3	C64	57	C68	111	C32	165	C57	219	B17	273	C16	327	No Conn	381	C62	473	B73	527	C34
4	B64	58	C68	112	C32	166	C57	220	B15	274	C16	328	↑	382	C62	474	B73	528	C34
5	B64	59	C63	113	B14	167	C57	221	B17	275	B57	329	↓	383	C18	475	B73	529	B65
6	B64	60	B56	114	B14	168	C57	222	B17	276	B31	330	No Conn	384	B58	476	B73	530	No Conn
7	B64	61	C63	115	C32	169	C57	223	B17	277	C16	331	C65	385	C18	477	B73	531	B76
8	B64	62	C63	116	C32	170	C57	224	B34	278	C66	332	C65	386	C18	478	C74	532	B76
9	B64	63	C63	117	C33	171	C57	225	B34	279	C65	333	C65	387	C56	479	C74	533	B76
10	B64	64	C63	118	C31	172	B13	226	B34	280	C65	334	No Conn	388	C56	480	B73	534	C76
11	B64	65	C63	119	C33	173	C58	227	B56	281	B32	335	C65	389	C56	481	B73	535	No Conn
12	B64	66	C64	120	C33	174	B68	228	B56	282	B14	336	C65	390	C56	482	B73	536	↑
13	B64	67	C63	121	C33	175	B68	229	B33	283	C16	337	C65	391	C63	483	B73	537	↓
14	B64	68	C63	122	C33	176	B68	230	B31	284	No Conn	338	No Conn	392	C63	484	No Conn	538	↓
15	B64	69	B58	123	C33	177	C57	231	B32	285	C16	339	C65	393	C76	485	B74	539	No Conn
16	B64	70	C63	124	C33	178	C57	232	B32	286	C16	340	C66	394	B55	486	B74	540	No Conn
17	B65	71	C13	125	C33	179	C57	233	B32	287	C16	341	B67	395	B55	487	B74		
18	B65	72	C13	126	C33	180	B18	234	C14	288	C16	342	B67	396	B55	488	B74		
19	B65	73	B63	127	C31	181	B15	235	B14	289	B57	343	B67	397	B55	489	B74		
20	B65	74	C56	128	C33	182	B15	236	C66	290	B57	344	B68	398	C55	490	B74		
21	B66	75	C18	129	C33	183	B16	237	B33	291	B33	345	B68	399	C55	491	B74		
22	B65	76	C13	130	C64	184	B16	238	C14	292	B31	346	B68	400	C55	492	B74		
23	B65	77	C18	131	B14	185	B17	239	C14	293	C16	347	No Conn	401	C31	493	B74		
24	B65	78	C13	132	No Conn	186	B16	240	C14	294	No Conn	348	C62	402	C31	494	B74		
25	B65	79	C32	133	C33	187	B17	241	B18	295	D24	349	No Conn	403	C31	495	B74		
26	B65	80	C32	134	C33	188	B18	242	B18	296	B68	350	C66	404	C31	496	B74		
27	B65	81	C32	135	C34	189	B18	243	B18	297	C65	351	No Conn	405	C55	497	B74		
28	B58	82	C32	136	B63	190	C18	244	B18	298	B56	352	↑	406	C56	498	B75		
29	B65	83	C64	137	B63	191	B15	245	B18	299	B33	353	↓	407	C56	499	B75		
30	B65	84	C64	138	B63	192	B15	246	B18	300	C65	354	↓	408	No Conn	500	B75		
31	C31	85	C64	139	C34	193	B16	247	C14	301	C66	355	↓	409	No Conn	501	B75		
32	C31	86	B58	140	C34	194	B16	248	C14	302	B58	356	No Conn	410	No Conn	502	B75		
33	C31	87	B58	141	C34	195	B17	249	C14	303	C62	357	C17			503	B75		
34	C31	88	B58	142	C34	196	B16	250	C15	304	C65	358	B13			504	B75		
35	C31	89	B57	143	C34	197	B17	251	C15	305	D24	359	C17	451	C14	505	B75		
36	No Conn	90	B57	144	C34	198	B14	252	C15	306	B57	360	C17	452	C13	506	B75		
37	B66	91	B57	145	C34	199	B15	253	C15	307	C24	361	C17	453	C13	507	B75		
38	B66	92	B57	146	B63	200	B15	254	C15	308	C65	362	C17	454	C14	508	No Conn		
39	B66	93	B57	147	B63	201	B15	255	C13	309	B58	363	C17	455	C14	509	C75		
40	C31	94	B58	148	B63	202	B15	256	B13	310	B57	364	C17	456	C14	510	C74		
41	B66	95	B56	149	C34	203	B15	257	B34	311	C33	365	B32	457	C14	511	C74		
42	B66	96	B56	150	C34	204	B15	258	B34	312	No Conn	366	B32	458	C14	512	C74		
43	B66	97	B56	151	C34	205	B15	259	B34	313	No Conn	367	B32	459	No Conn	513	C74		
44	B66	98	B56	152	C64	206	B15	260	B68	314	No Conn	368	B31	460	No Conn	514	C74		
45	B66	99	B57	153	C34	207	B16	261	C15	315	B32	369	B31	461	C74	515	C74		
46	B66	100	B56	154	B18	208	B16	262	C15	316	B32	370	No Conn	462	C73	516	C74		
47	B66	101	C56	155	B68	209	B16	263	C15	317	B32	371	B56	463	C73	517	C74		
48	B67	102	C56	156	C18	210	B56	264	C15	318	B32	372	B56	464	C73	518	C74		
49	B67	103	B14	157	C64	211	B16	265	C15	319	B32	373	B57	465	C73	519	B63		
50	B67	104	No Conn	158	C64	212	B16	266	C15	320	B32	374	B57	466	C73	520	B63		
51	B67	105	C32	159	B57	213	B16	267	C15	321	B32	375	C17	467	C73	521	B63		
52	B67	106	C32	160	B57	214	B17	268	C16	322	C58	376	C17	468	C73	522	B63		
53	B56	107	C32	161	C58	215	B17	269	C16	323	B68	377	C17	469	No Conn	523	B63		
54	B67	108	C32	162	C57	216	B17	270	B56	324	B32	378	C17	470	C73	524	B62		

Figure 2.3 (U). Continued (sheet 17 of 18).

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INDEX OF TERMINALS — RECORDER GROUP (FIG. 59*)								INDEX OF TERMINALS — DIRECTOR STATION GROUP (WITH AAR)								INDEX OF TERMS. UTILITY CABINET		INDEX OF TERMINALS — TARGET DATA PROCESSING UNIT					
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	D47	55	D53	109	D56	163	D50	1	No Conn	55	No Conn	109	A65	163	A68	TB2-1	D19	1	A75	55	A76	303	C77
2	D47	56	D53	110	D55	164	D50	2	D64	56	A67	110	No Conn	164	No Conn	TB2-2	D19	2	A76	56	A76	304	C77
3	D47	57	D52	111	D55	165	No Conn	3	No Conn	57	No Conn	111	A64	165	D22			3	A76	57	A77	305	No Conn
4	D47	58	D52	112	D55	166	↑	4	D69	58	A67	112	A64	166	D66			4	A76	58	A78	306	↑
5	D50	59	D52	113	D55	167		5	D63	59	No Conn	113	A64	167	D65			5	A76	59	No Conn	307	↓
6	D51	60	D52	114	No Conn	168		6	D22	60	A67	114	A66	168	D65			6	A76	60	No Conn	308	No Conn
7	C40	61	D52	115	D58	169	↓	7	D62	61	No Conn	115	A66	169	D65			7	No Conn	61	No Conn	309	C77
8	C40	62	D52	116	D40	170	No Conn	8	No Conn	62	D66	116	A66	170	D65			8	A76	62	A76	310	B77
9	D51	63	D52	117	D55	171	C40	9	↑	63	D65	117	D64	171	D62			9	A76	63	A74	311	No Conn
10	D51	64	D51	118	D40	172	C40	10		64	D65	118	D64	172	D62			10	A76	64	No Conn	312	↑
11	D58	65	No Conn	119	No Conn	173	C40	11		65	D65	119	A66	173	D62			11	A73	65	No Conn	313	
12	D58	66	No Conn	120	C42	174	C40	12		66	D39	120	A65	174	A65			12	A73	66	A74	314	
13	D57	67	D57	121	C42	175	D56	13		67	A67	121	A63	175	D66			13	A73	67	A75	315	
14	D57	68	No Conn	122	D42	176	D56	14		68	C38	122	A63	176	D66			14	A73	68	No Conn	316	
15	D57	69	↑	123	D42	177	No Conn	15	↓	69	C38	123	A63	177	D65			15	A73	69	No Conn	317	
16	D57	70		124	D42	178	↑	16	No Conn	70	C37	124	A63					16	A73	70	No Conn	318	
17	D49	71		125	D42	179		17	C38	71	C39	125	A63					17	A73	71	A75	319	↓
18	D50	72		126	D56	180		18	D64	72	C39	126	A66					18	No Conn	72	B76	320	No Conn
19	C42	73		127	D42	181		19	No Conn	73	C39	127	A66					19	No Conn	73	B76		
20	C42	74	↓	128	D42	182		20	C38	74	D37	128	D65					20	No Conn	74	B76		
21	D44	75	No Conn	129	D42	183		21	No Conn	75	C38	129	A64					21	A75	75	C76		
22	D45	76	D57	130	D42	184		22	D63	76	C38	130	A64	EG-1	No Conn			22	A75	76	No Conn		
23	D45	77	D57	131	D56	185		23	No Conn	77	C38	131	A65	-2	↑			23	A75	77	↑		
24	D45	78	D57	132	D42	186		24	No Conn	78	C39	132	A66	-3	↓			24	A75	78	↓		
25	D43	79	D50	133	No Conn	187		25	D64	79	D64	133	A66	-4	No Conn			25	A75	79			
26	D46	80	C41	134	D42	188		26	D64	80	A68	134	A66	-5	D62			26	A74	80	No Conn		
27	D46	81	D46	135	D56	189		27	D64	81	D65	135	A64	-6	D37			27	A74				
28	D47	82	D46	136	C40	190		28	No Conn	82	A68	136	A66	-7	D38			28	A73				
29	D57	83	No Conn	137	D56	191		29	A63	83	A68	137	A67	-8	D38			29	A75				
30	D50	84	No Conn	138	C40	192		30	D63	84	A68	138	A64	-9	D38			30	A75				
31	C40	85	D58	139	D56	193		31	No Conn	85	D22	139	A67	-10	D38			31	A74				
32	D57	86	D58	140	D56	194		32	D69	86	No Conn	140	A65	-11	D38			32	A74				
33	D46	87	D58	141	C40	195		33	D37	87	A65	141	A67	-12	D64			33	A74	281	B77		
34	D46	88	No Conn	142	C40	196		34	D37	88	A65	142	A67	-13	D38			34	A74	282	No Conn		
35	D57	89	D58	143	C41	197		35	No Conn	89	A65	143	A67	-14	D38			35	No Conn	283	C77		
36	D57	90	D58	144	C41	198		36	No Conn	90	A64	144	A67	-14	No Conn			36	A74	284	No Conn		
37	D51	91	D44	145	C41	199	↓	37	D62	91	C38	145	D65					37	A75	285	C77		
38	D51	92	D58	146	C41	200	No Conn	38	No Conn	92	D22	146	D68	EN-1	No Conn			38	No Conn	286	No Conn		
39	D51	93	D57	147	C41			39	D64	93	D22	147	D65	-2	D64			39	No Conn	287	C77		
40	D51	94	D57	148	C41			40	No Conn	94	D63	148	No Conn	-3	D38			40	No Conn	288	No Conn		
41	D50	95	D39	149	C40			41	No Conn	95	A65	149	D37	-4	D38			41	A75	289	C77		
42	D51	96	D40	150	C40			42	D69	96	No Conn	150	D37	-5	D63			42	A75	290	No Conn		
43	D44	97	D47	151	C40			43	D66	97	D63	151	A63	-6	D38			43	A75	291	C77		
44	D44	98	D47	152	C40			44	D39	98	A64	152	A63	-7	D39			44	A73	292	No Conn		
45	D45	99	No Conn	153	D48			45	D63	99	A64	153	A63	-8	D39			45	A74	293	No Conn		
46	D45	100	No Conn	154	D48			46	D62	100	A64	154	A63	-9	D69			46	A74	294	B77		
47	D45	101	C42	155	D49			47	A64	101	D64	155	A63	-10	D69			47	No Conn	295	C76		
48	D45	102	D40	156	D48			48	No Conn	102	No Conn	156	D69	-11	No Conn			48	No Conn	296	No Conn		
49	D46	103	C42	157	D49			49	No Conn	103	D37	157	A63	-12	D38			49	No Conn	297	B77		
50	D46	104	D58	158	D49			50	No Conn	104	D37	158	D23	-13	D38			50	No Conn	298	No Conn		
51	D44	105	D58	159	D49			51	D65	105	A65	159	D62	-14	D22			51	A76	299	C77		
52	D44	106	D40	160	D49			52	D69	106	A64	160	D62	-15	No Conn			52	A76	300	C77		
53	D44	107	D40	161	D48			53	No Conn	107	A66	161	A68					53	A74	301	C77		
54	D43	108	C42	162	D48			54	D62	108	A65	162	A68					54	A76	302	C77		

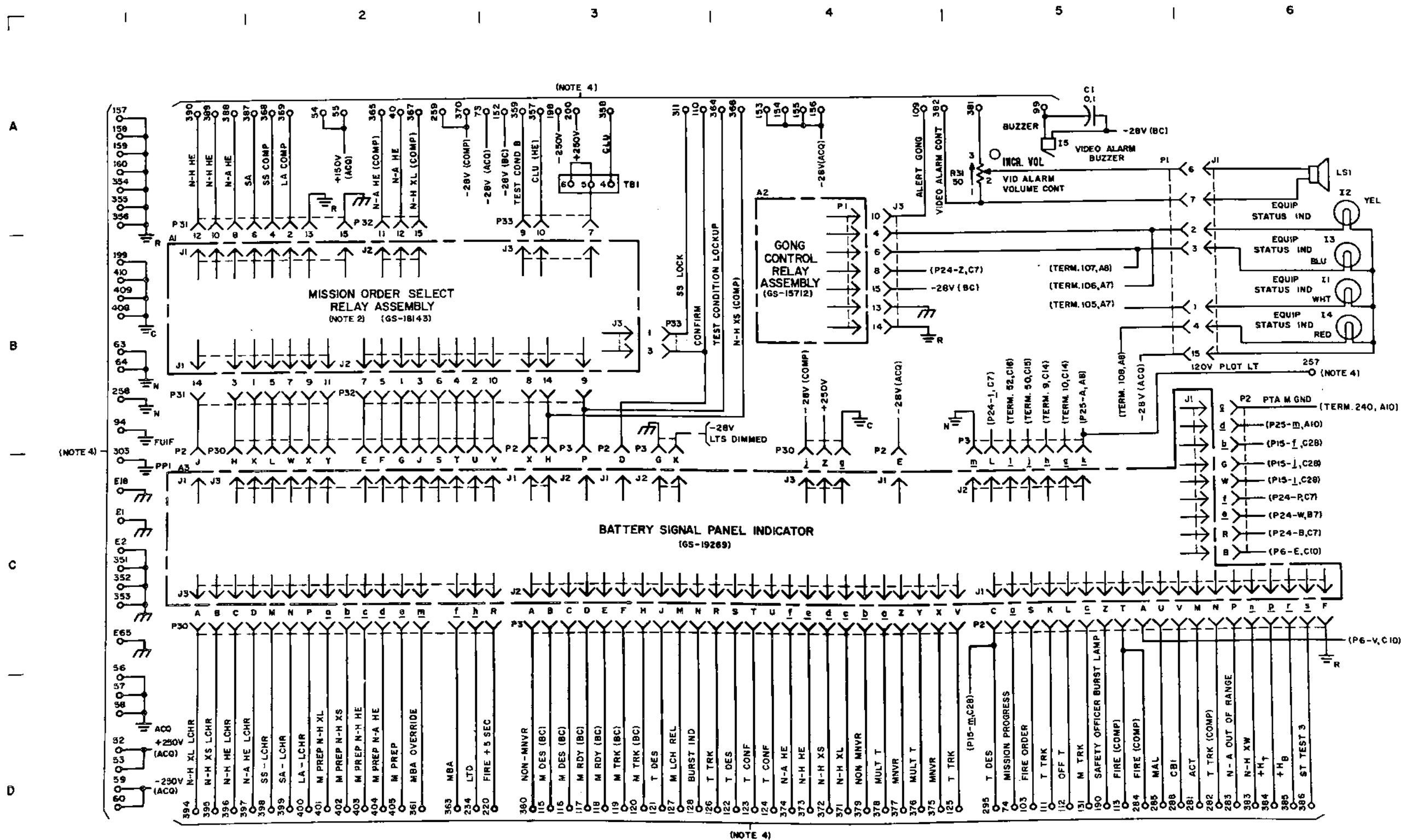
Figure 2.3 (U). Continued (sheet 18 of 18).

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Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
A1					9000324	GS-19556
A2					9000326	GS-19559
A3					8173147	GS-17583
A4					8010350	GS-15568
A5					8512908	GS-18138
A6					8513626	GS-18032
A7					9986480	GS-65940
A8					8517797	GS-18189
A9					8512882	GS-18144
A10					8010134	GS-55095
C301	4	+10		600	7593727	
C302	2	+10		600	7593726	
C303	2	+10		600	7593726	
CR302					8024363	
I301					7653456	
L301					8007179	
L302					8007179	
T301					8007193	
TB301					8175113	
A11					8019167	GS-17524
A12					8513740	GS-18177
TB31					8008374	
TY1					8008998	
TY2					8008998	
A13					9005301	GS-19543
A14					MX-1995/TPA-3	NONE
A15					9985626	GS-65793
A16					9990673	GS-67179
I9A-1			25	120	8330088	
I9A-2			6	120	8328090	
I9B-1			25	120	8330088	
I9B-2			6	120	8328090	
I9C-1			25	120	8330088	
I9C-2			6	120	8328090	
I9D-1			25	120	8330088	
I9D-2			6	120	8328090	
I9E-1			25	120	8330088	
I9E-2			6	120	8328090	
I9F-1			25	120	8330088	
I9F-2			6	120	8328090	
I10A-1			6	120	8338088	
I10A-2					193048	
I10B-1			6	120	8338088	
I10B-2					193048	
I11A			8		8331295	
I11B			8		8331295	
I11C			8		8331295	
I11D			8		8331295	
I11E			8		8331295	
I20					572994	
J9					7720490	
J22					8175623	
P1					MS35170	
P2					MS35170	
P3					MS35170	
P4					MS35170	
P5					9144413	
P6					9144413	
P7					MS35170	
P8					MS35170	

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
P9					MS35170	
P10					MS35170	
P11					MS35170	
P12					MS35170	
P13					MS35170	
P14					MS35170	
P15					MS35170	
P16					MS35170	
P17					MS35170	
P19					MS35170	
P20					MS35170	
P21					MS35170	
P22					MS35170	
P23					MS35170	
P24					MS35170	
P25					MS35170	
P26					MS35170	
P27					MS35170	
P28					MS35170	
P29					9144413	
P30					9144413	
P31					MS35170	
P32					MS35170	
P33					MS35170	
P34					9144413	
P35					9150387	
P36					9144413	
P41					8019387	
P50					9144413	
P54					9144413	
P55					9150387	
P93					MS35170	
P101					MS3106A22-14S	
P131					MS35170	
P134					MS35170	
P137					MS35170	
P201					MS35170	
P202					MS35170	
P203					MS3106A14-5S	
P204					MS35170	
P205					MS3106A22-14B	
P206					MS3106A14S-7B	
S1					7602615	
S4					MS35100-3	
S5	10			125	8019910	
S6					502688	
S9					MS35059-17	
TB4					7619754	
TB6A					8219431	
TB7A					8219432	
TB8A					8219433	
TB8A					8219433	
TB8C					8219433	
TB8D					8219433	
TB8E					8219433	
TB8F					8219433	
TB8G					8219433	
TB8H					8219433	
TB9A					8219433	
TB9B					8219433	

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■ Figure 3 (U). Battery control console 8178147—schematic diagram (sheet 1 of 7) (U).

ORD G82801 ■

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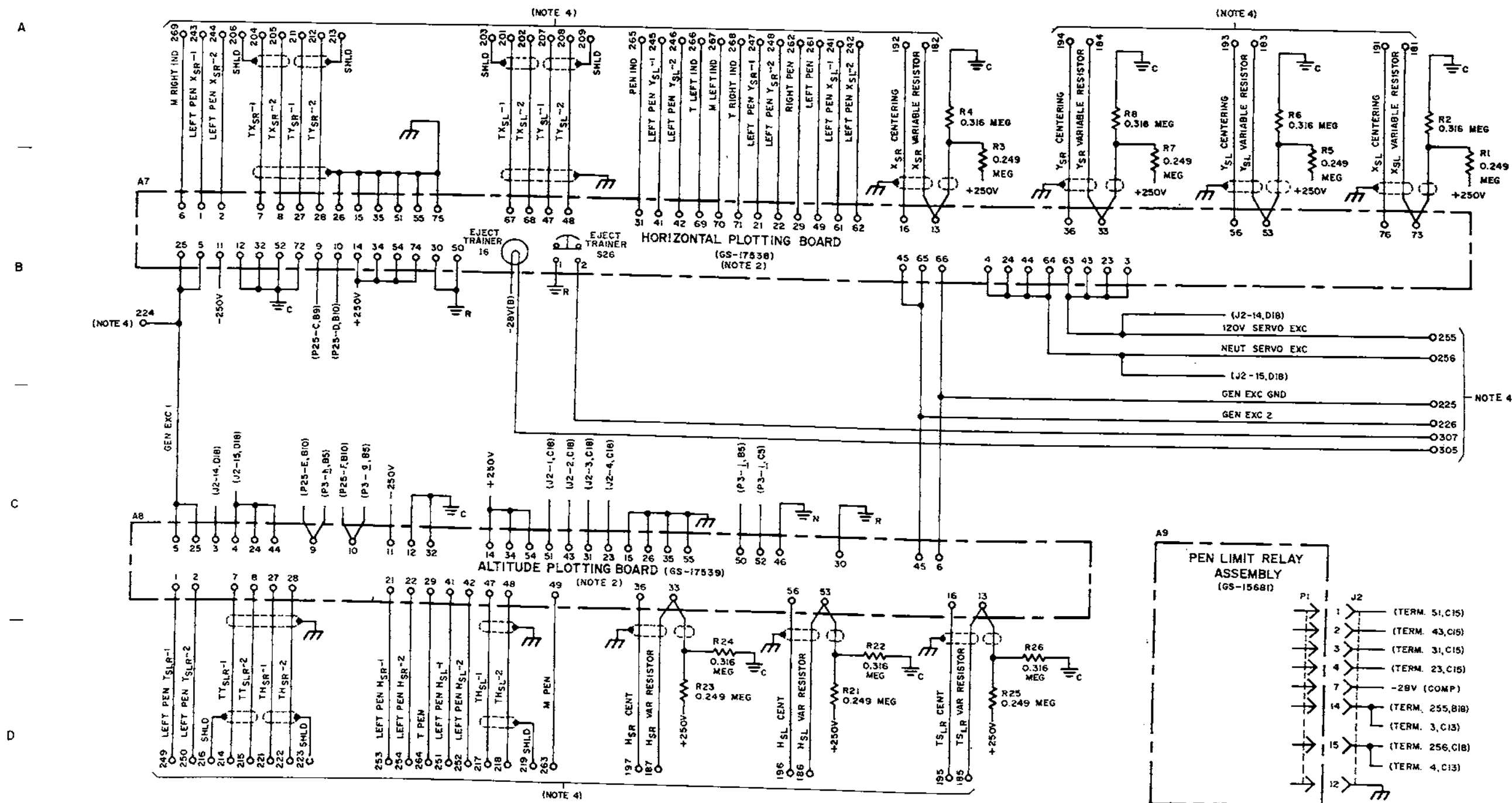


Figure 3 (U). Continued (sheet 3 of 7).

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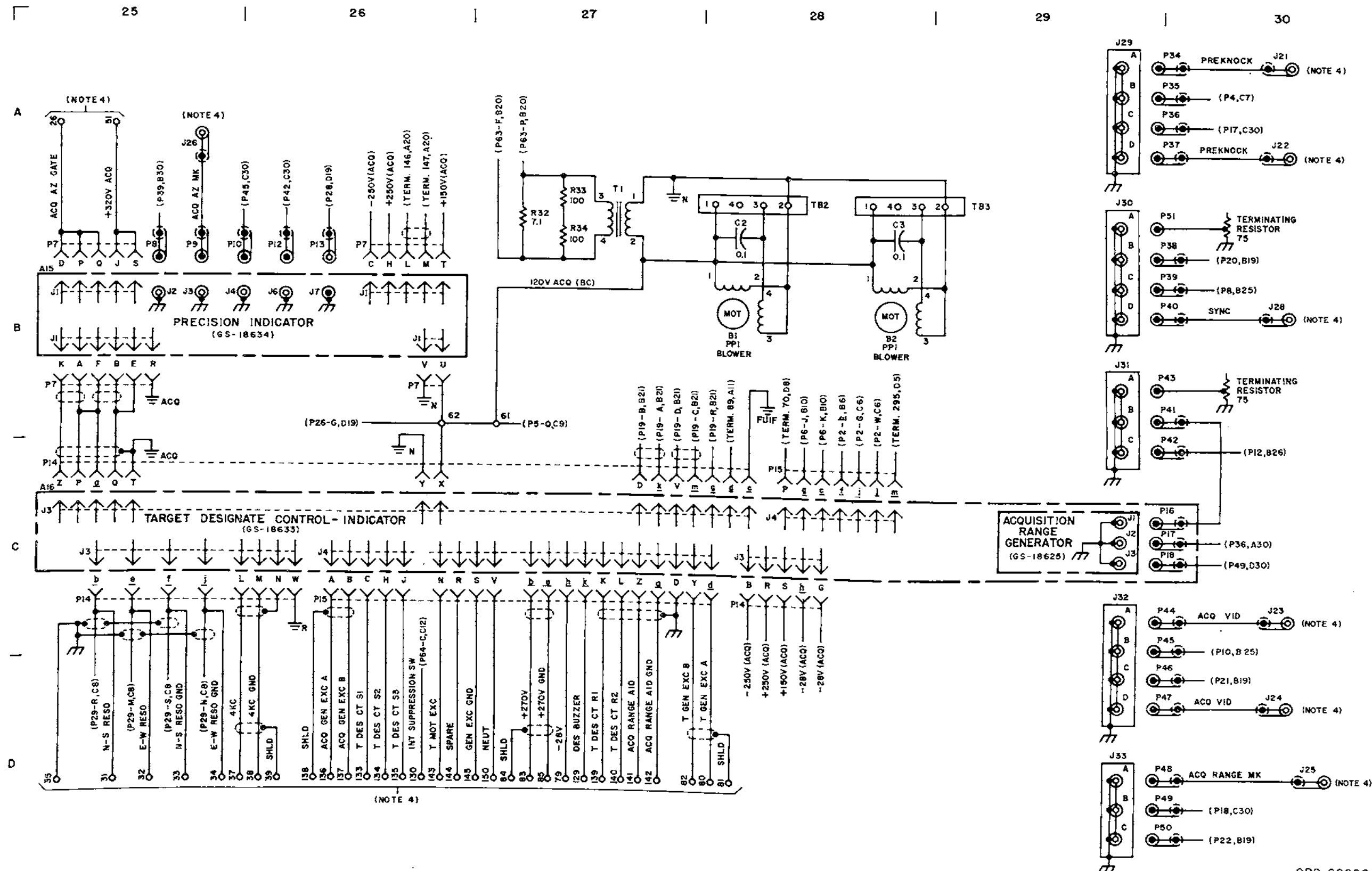


Figure 3 (U). Continued (sheet 5 of 7).

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## NOTES:

1. ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
2. REFER TO TM9-1430-258-20
3. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:
  - J1-5,8-14
  - J2-5,6,8-11,13
  - J3-1,2,3,5,7,9,11,12
  - J11-J,K,L
  - J12-J,K,L
  - J13-J,K,L
  - J60-C,L,M,N,P,Q
  - P1-5,8-14
  - P2-Y, b, j, k, m
  - P3-W
  - P5-E
  - P7-G,N
  - P14-A,C,E,F,H,J,K,U
  - P15-E,F,G,T,U,W,X
  - P19-H,I,P,Q,S,T,W,X
  - P24-E,R,S,T,U,V,Y, a, b, e
  - P25-G,L, a, b
  - P26-B,D,E,H
  - P30-i, k
  - P32-13
  - P33-2,4,5,6,8,11,12,13,14,15
  - P57-G
  - P62-W,X,Y,Z, a, b, c, d, e, f, g, h, j, k, i, m
  - P63-D,H,Q,S,Y
  - P64-D,E
  - TB1-1,2,3,7,8,9,10,11,12
  - TB2-5,6,7,8,9,10
  - TB3-5,6,7,8,9,10
4. REFER TO SCHEMATIC OF TRAILER MOUNTED DIRECTOR STATION (GS-17582) 9985678.
5. FOR FUTURE CONNECTION TO TELEPHONE CIRCUITS
6. REFER TO TM9-1400-251-12

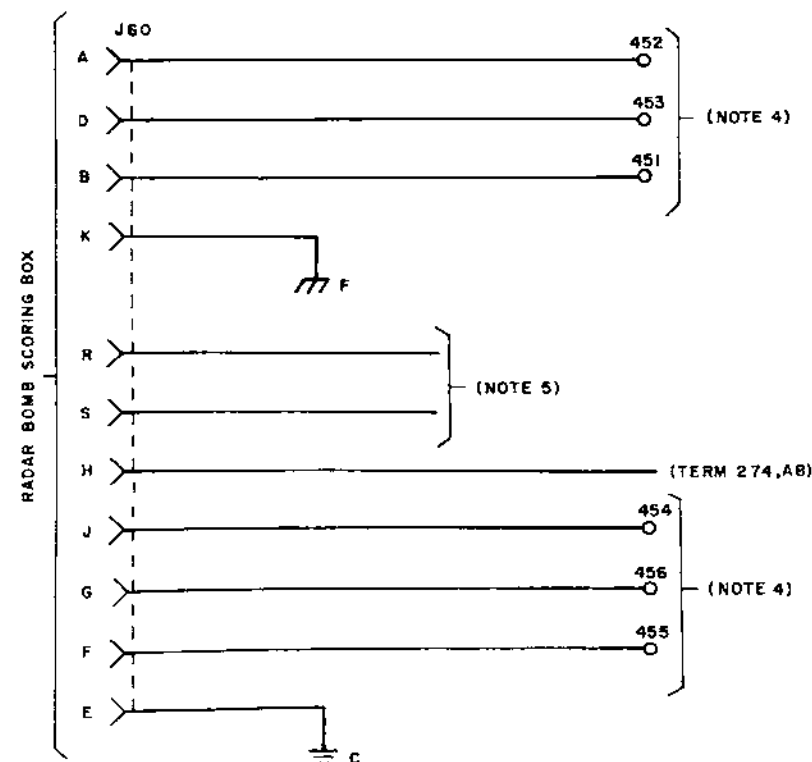


Figure 3 (U). Continued (sheet 6 of 7).

707-212 O-63-3

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ORD G82805

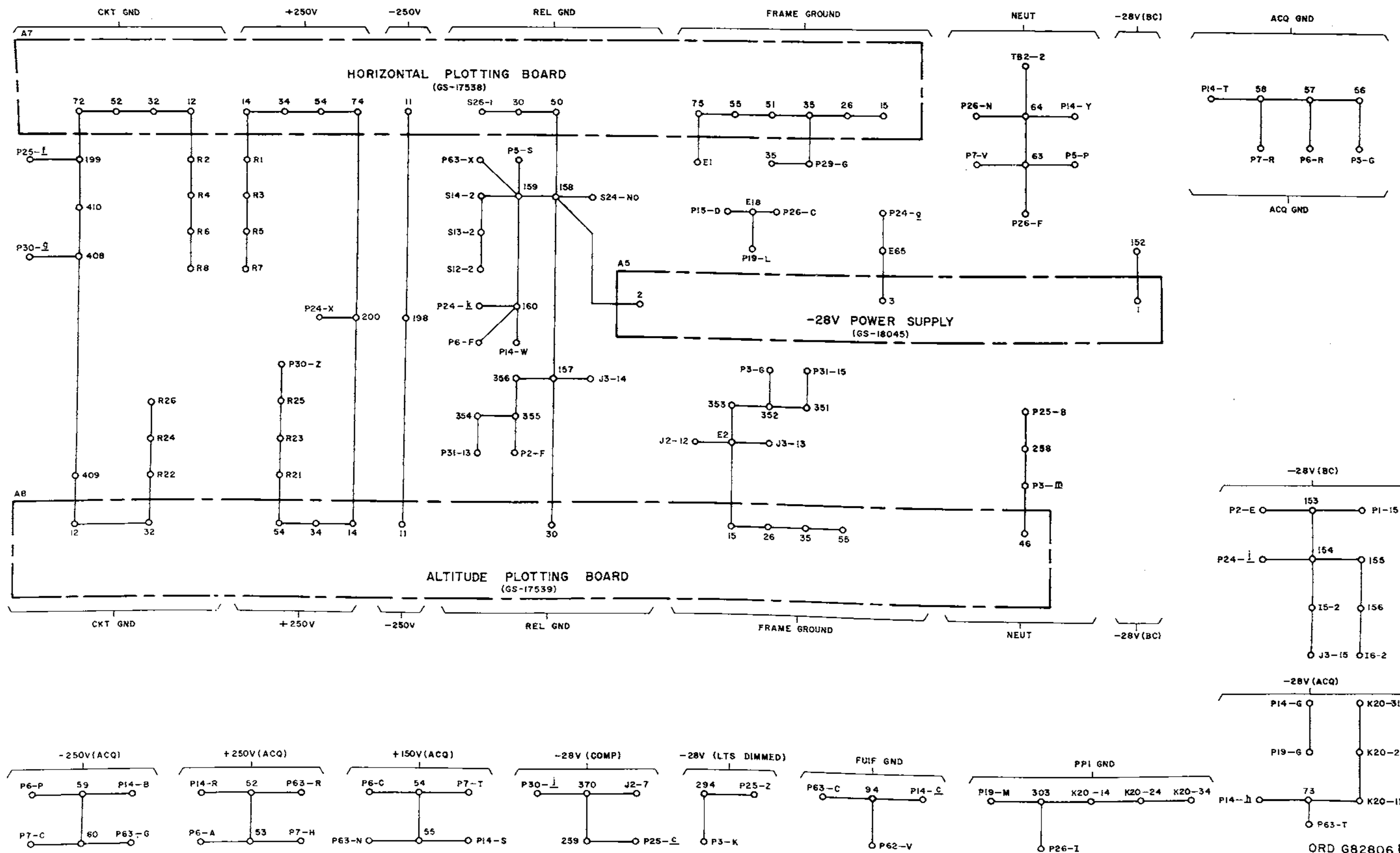


Figure 3 (U). Continued (sheet 7 of 7).

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## (U) INDEX OF TERMINALS

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	D11	55	A2	109	A4	163	A23	217	D14	271	A9	325	No Conn	379	D4
2	D11	56	D1	110	A3	164	A23	218	D14	272	A9	326	No Conn	380	D3
3	D11	57	D1	111	D5	165	A23	219	D15	273	A9	327	No Conn	381	A5
4	D11	58	D1	112	D5	166	A23	220	D3	274	A8	328	No Conn	382	A4
5	D11	59	D1	113	D5	167	D24	221	D14	275	D21	329	No Conn	383	D6
6	D10	60	D1	114	D10	168	D24	222	D14	276	A9	330	No Conn	384	D6
7	D10	61	B27	115	D3	169	D21	223	D14	277	A9	331	D10	385	D6
8	D10	62	B26	116	D3	170	D22	224	B13	278	D20	332	D10	386	D6
9	No Conn	63	B1	117	D3	171	D21	225	C18	279	D20	333	D12	387	A2
10	D7	64	B1	118	D3	172	A7	226	C18	280	D20	334	No Conn	388	A1
11	D9	65	D10	119	D3	173	A23	227	A10	281	D6	335	D12	389	A1
12	D11	66	D10	120	D3	174	No Conn	228	A10	282	D6	336	D12	390	A1
13	D7	67	D10	121	D3	175	No Conn	229	A8	283	D6	337	D12	391	D9
14	D7	68	D11	122	D4	176	No Conn	230	A9	284	D5	338	No Conn	392	D9
15	D11	69	A7	123	D4	177	D23	231	A9	285	D5	339	D12	393	No Conn
16	D11	70	D8	124	D4	178	A23	232	A9	286	A7	340	D12	394	D1
17	D7	71	A12	125	D5	179	A23	233	A9	287	No Conn	341	D12	395	D1
18	D7	72	A12	126	D4	180	A9	234	D2	288	D5	342	D12	396	D1
19	D7	73	A3	127	D3	181	A18	235	A10	289	D21	343	D12	397	D2
20	D8	74	D5	128	D3	182	A16	236	D10	290	D21	344	D12	398	D2
21	D11	75	A7	129	D27	183	A17	237	No Conn	291	A9	345	D12	399	D2
22	D11	76	A8	130	D26	184	A17	238	A10	292	A9	346	D12	400	D2
23	D8	77	A8	131	D5	185	D16	239	A10	293	A9	347	No Conn	401	D2
24	D8	78	A8	132	No Conn	186	D16	240	A10	294	A10	348	D10	402	D2
25	D8	79	D27	133	D26	187	D15	241	A16	295	D5	349	No Conn	403	D2
26	A25	80	D28	134	D26	188	A7	242	A16	296	C12	350	D9	404	D2
27	D8	81	D28	135	D26	189	No Conn	243	A13	297	A20	351	C1	405	D2
28	A20	82	D27	136	D26	190	D5	244	A13	298	A11	352	C1	406	No Conn
29	D23	83	D27	137	D26	191	A18	245	A15	299	D20	353	C1	407	A8
30	D22	84	D27	138	D26	192	A16	246	A15	300	No Conn	354	A1	408	B1
31	D25	85	D27	139	D27	193	A17	247	A15	301	B12	355	A1	409	B1
32	D25	86	A10	140	D27	194	A17	248	A16	302	A12	356	A1	410	B1
33	D25	87	A10	141	D27	195	D16	249	D13	303	C1	357	A3		
34	D25	88	A10	142	D27	196	D16	250	D13	304	D20	358	A3		
35	D25	89	A11	143	D26	197	D15	251	D14	305	C18	359	A3		
36	No Conn	90	A11	144	D26	198	A3	252	D14	306	A20	360	A7		
37	D26	91	A11	145	D27	199	B1	253	D14	307	C18	361	D2		
38	D26	92	A11	146	A20	200	A3	254	D14	308	B12	362	No Conn		
39	D26	93	A11	147	A20	201	A14	255	B18	309	A19	363	D2		
40	A2	94	B1	148	A20	202	A15	256	B18	310	A20	364	A4	451	C32
41	D9	95	A11	149	D11	203	A14	257	B6	311	A3	365	A2	452	C32
42	D9	96	A11	150	D27	204	A13	258	B1	312	No Conn	366	A4	453	C32
43	D8	97	A11	151	No Conn	205	A14	259	A2	313	No Conn	367	A2	454	D32
44	D8	98	A11	152	A3	206	A13	260	B12	314	No Conn	368	A2	455	D32
45	D8	99	A5	153	A4	207	A15	261	A16	315	A23	369	A2	456	D32
46	D9	100	A11	154	A4	208	A15	262	A16	316	A24	370	A2		
47	D9	101	A7	155	A4	209	A15	263	D15	317	A24	371	D4		
48	D9	102	A7	156	A4	210	A11	264	D14	318	A24	372	D4		
49	D8	103	D5	157	A1	211	A14	265	A15	319	A24	373	D4		
50	D7	104	A7	158	A1	212	A14	266	A15	320	A24	374	D4		
51	A25	105	A7	159	A1	213	A14	267	A15	321	No Conn	375	D4		
52	D1	106	A7	160	A1	214	D13	268	A15	322	No Conn	376	D4		
53	D1	107	A8	161	D24	215	D13	269	A13	323	No Conn	377	D4		
54	A2	108	A8	162	D24	216	D13	270	A10	324	No Conn	378	D4		

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(U) Battery Control Console 8173147—Apparatus List

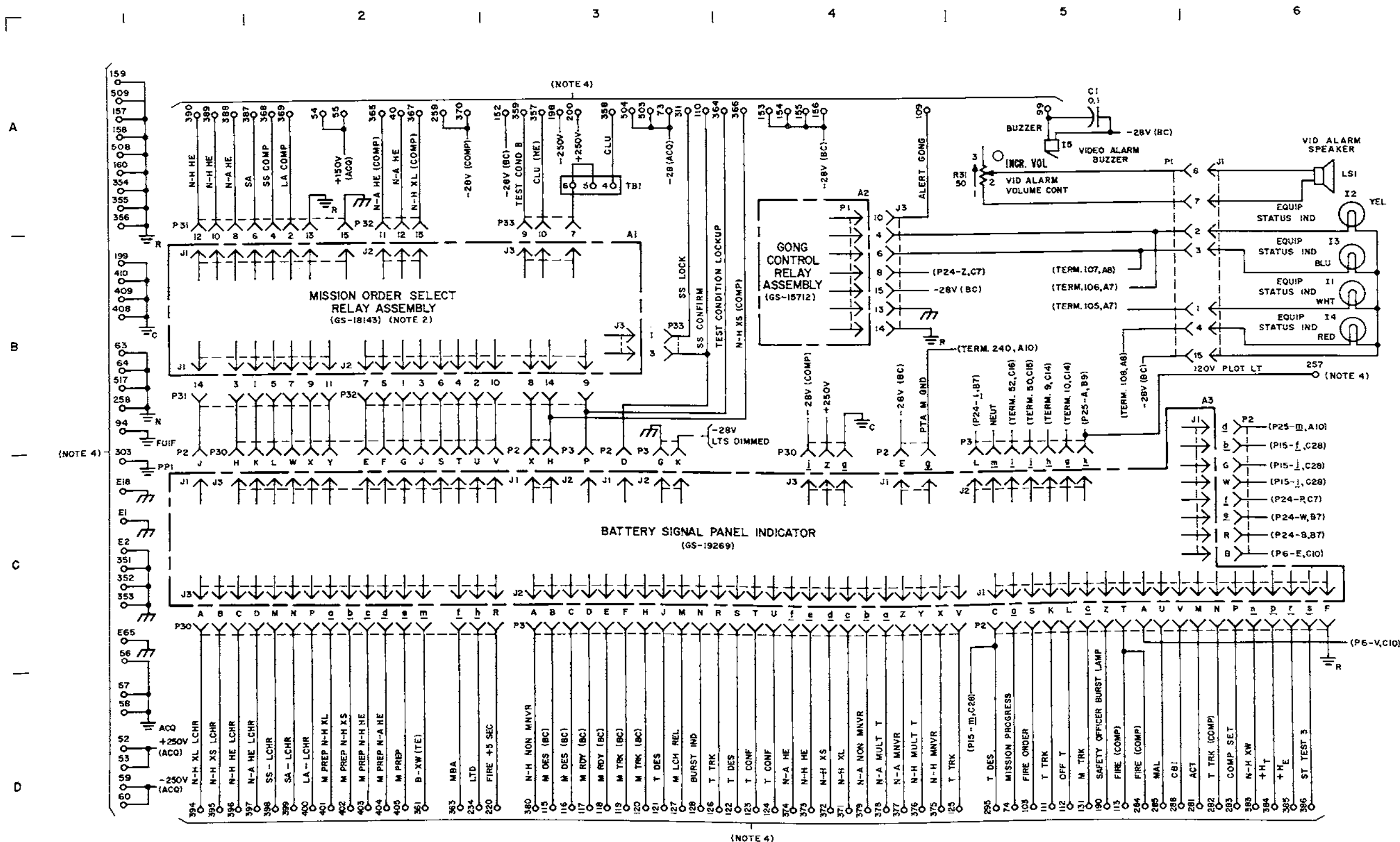
(U) Battery Control Console 8173147—Apparatus List—Continued

Reference designation	Ordinance part no.	Part description
B1, B2	7599786	MOTOR, ALTERNATING CURRENT: permanent split capacitor, 115v ac, 400 cps, sgls-ph, 32w, 7200 rpm
C1	7559189	CAPACITOR, FIXED, PAPER DIELECTRIC: 200v dc, 0.1 $\mu$ f $\pm 10\%$
C2, C3	7631683	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.1 $\mu$ f $\pm 10\%$ , type CP53B1EF104K
CR1, CR2, CR3		SEMICONDUCTOR DEVICE, DIODE: rectifying, germanium (WECO-G221549)
I1, I2, I3, I4, I6	572994	LAMP, INCANDESCENT: 24-28v, sgls-fil, type 1819
I5	7599913	BUZZER: Signal, 24v ac or dc, 60 cps, 6 ohm
J1	7598934	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont
J2, J3	7599367	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 female cont
J11, J12, J13	8175623	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 10 male cont
J21, J22, J23, J24, J25, J26, J27, J28	7599662	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont
J29, J30, J32	9003874	ADAPTER, CONNECTOR: stght, 4 female cont
J31, J33	8519232	ADAPTER, CONNECTOR: stght, 3 female cont
J34	MS35181	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG910/U
K20	9004095	RELAY, ARMATURE: spst, cont 50v dc, 0.5 amp, coil 48v dc, 10.5 ma, 1025 ohm
LS1	8011143	LOUDSPEAKER, DYNAMIC: permanent magnet field, 8 ohm voice coil impedance, 3w input
P1, P31, P32, P33	7605564	CONNECTOR, PLUG, ELECTRICAL: polarized, 15 female cont
P2	MS3106A28-21S	CONNECTOR, PLUG, ELECTRICAL: stght, 37 female cont
P3	MS3106A28-15SW	CONNECTOR, PLUG, ELECTRICAL: stght, 35 female cont
P4	7602336	CONNECTOR, PLUG, ELECTRICAL: angle, 1 male cont
P5	MS3108B36-15S	CONNECTOR, PLUG, ELECTRICAL: angle, 35 female cont
P6	8526289	CONNECTOR, PLUG, ELECTRICAL: angle, 26 female cont
P7	MS3106A28-16S	CONNECTOR, PLUG, ELECTRICAL: stght, 20 female cont
P8, P9, P10, P12, P16, P17, P18, P20, P21, P22, P34, P35, P36, P37, P38, P39, P40, P41, P42, P44, P45, P46, P47, P48, P49, P50, P52	MS35170	CONNECTOR, PLUG, ELECTRICAL: stght, 1 male cont, type UG260B/U
P13, P23, P27, P28, P53, P55, P56, P58, P60, P61	7602334	CONNECTOR, PLUG, ELECTRICAL: stght, 1 female cont
P14	MS3106A36-15S	CONNECTOR, PLUG, ELECTRICAL: stght, 35 female cont
P15, P30	MS3106A28-15S	CONNECTOR, PLUG, ELECTRICAL: stght, 35 female cont
P19	MS3108B28-11S	CONNECTOR, PLUG, ELECTRICAL: angle, 22 female cont
P24	MS3108B28-15SW	CONNECTOR, PLUG, ELECTRICAL: angle, 35 female cont
P25	MS3108B28-15S	CONNECTOR, PLUG, ELECTRICAL: angle, 35 female cont
P26	MS3106A20-27S	CONNECTOR, PLUG, ELECTRICAL: stght, 14 female cont
P29	MS3108B24-28S	CONNECTOR, PLUG, ELECTRICAL: angle, 24 female cont
P43, P51	7601757	ADAPTER, CONNECTOR: stght, 1 male cont, w/resistor, 1/2w, 75 ohm $\pm 5\%$ , bridged across cont
P54, P59	9009436	CONNECTOR, PLUG, ELECTRICAL: stght, 1 male cont, type UG932A/U
P57	MS3106A24-2P	CONNECTOR, PLUG, ELECTRICAL: stght, 7 male cont
P62	MS3108B28-15SX	CONNECTOR, PLUG, ELECTRICAL: angle, 35 male cont
P63	MS3108B28-11SW	CONNECTOR, PLUG, ELECTRICAL: angle, 22 female cont
P64	MS3108B16S-8S	CONNECTOR, PLUG, ELECTRICAL: angle, 5 female cont

Reference designation	Ordinance part no.	Part description
R1, R3, R5, R7, R21, R23, R25	7599636	RESISTOR, FIXED, FILM: 1w, 0.249 meg $\pm 1\%$
R2, R4, R6, R8, R22, R24, R26	7599747	RESISTOR, FIXED, FILM: 1w, 0.316 meg $\pm 1\%$
R31	9004097	RESISTOR, VARIABLE: composition; 2w, 50 ohm $\pm 10\%$
R32	9009488	RESISTOR, FIXED, WIRE WOUND: power type, tubr, tab term., 11w, 7.1 ohm $\pm 5\%$
R33, R34	MS35043-63	RESISTOR, FIXED, COMPOSITION: 1/2w, 100 ohm $\pm 5\%$ , type RC20GF101J
S11	9001495	SWITCH, TOGGLE: dpdt, 250v ac or dc, 2 amp, 125v ac or dc, 5 amp, type ST22N
S12, S13, S14	7602615	SWITCH, PUSH: spst, 115-230v ac, 15-7.5 amp, 24v dc, 17 amp
S21, S22, S23, S24, S25	7602749	SWITCH, PUSH-PULL: spdt, 125v ac or 250v ac, 15 amp, 125v dc, 1/2 amp
S26	9000695	SWITCH, PUSH: dpdt, normally open, 250v dc, 1-1/2 amp, 125v dc, 3 amp
T1	8015382	REGULATOR: 110-130v ac, 385-415 cps operating v, 1-3 amp at 5.9-6.8v ac output
TB1	9004457	TERMINAL BOARD: 12 screw term., assy
TB2, TB3	7599704	TERMINAL BOARD: plastic, 10 sgls-ended solder lug term.
	7634159	TERMINAL BOARD: plastic, 10 sgls-ended solder lug term. (terminals 1-410)
C301	7593727	TELEPHONE SET TA-272/G 8010134
C302, C303	7593726	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 4 $\mu$ f $\pm 10\%$ , type CP70B1EF405K
CR302	8024363	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 2 $\mu$ f $\pm 10\%$ , type CP70B1EF205K
I301	7653456	RESISTOR, VOLTAGE SENSITIVE: 18.2 ohm max at 2v dc, 9.5 ohm min at 0.1v dc
L301, L302	8007179	RINGER, TELEPHONE: 90v, 16-20 cps, coil 650 ohm $\pm 5\%$
T301	8007193	COIL, TELEPHONE RETARDATION: 2 wnd, 76.5 ohm and 93.5 ohm
TB301	8175113	TRANSFORMER: line type 200-3500 cps
		TERMINAL BOARD: plastic, 10 screw term.
		ALTITUDE PLOTTING BOARD 8171886
		HORIZONTAL PLOTTING BOARD 8171900
		MISSION ORDER SELECT RELAY ASSEMBLY 9154880
		PEN LIMIT RELAY ASSEMBLY 8009615
		PPI 9142868 (see fig. 4 for component parts)
		PRECISION INDICATOR 9007681 (see fig. 10 for component parts)
		BATTERY SIGNAL PANEL-INDICATOR 9155164 (see fig. 15 for component parts)
		TACTICAL CONTROL-INDICATOR 9142894 (see fig. 16 for component parts)
		PPI HV POWER SUPPLY 9142872 (see fig. 17 for component parts)
		TARGET DESIGNATE CONTROL-INDICATOR 9007683 (see fig. 18 for component parts)
		ACQUISITION CONTROL-INDICATOR 9137929 (see fig. 21 for component parts)
		-28V POWER SUPPLY 8512751 or 9986424 (see fig. 23 for component parts)
		GONG CONTROL RELAY ASSEMBLY 8012372 (see fig. 24 for component parts)



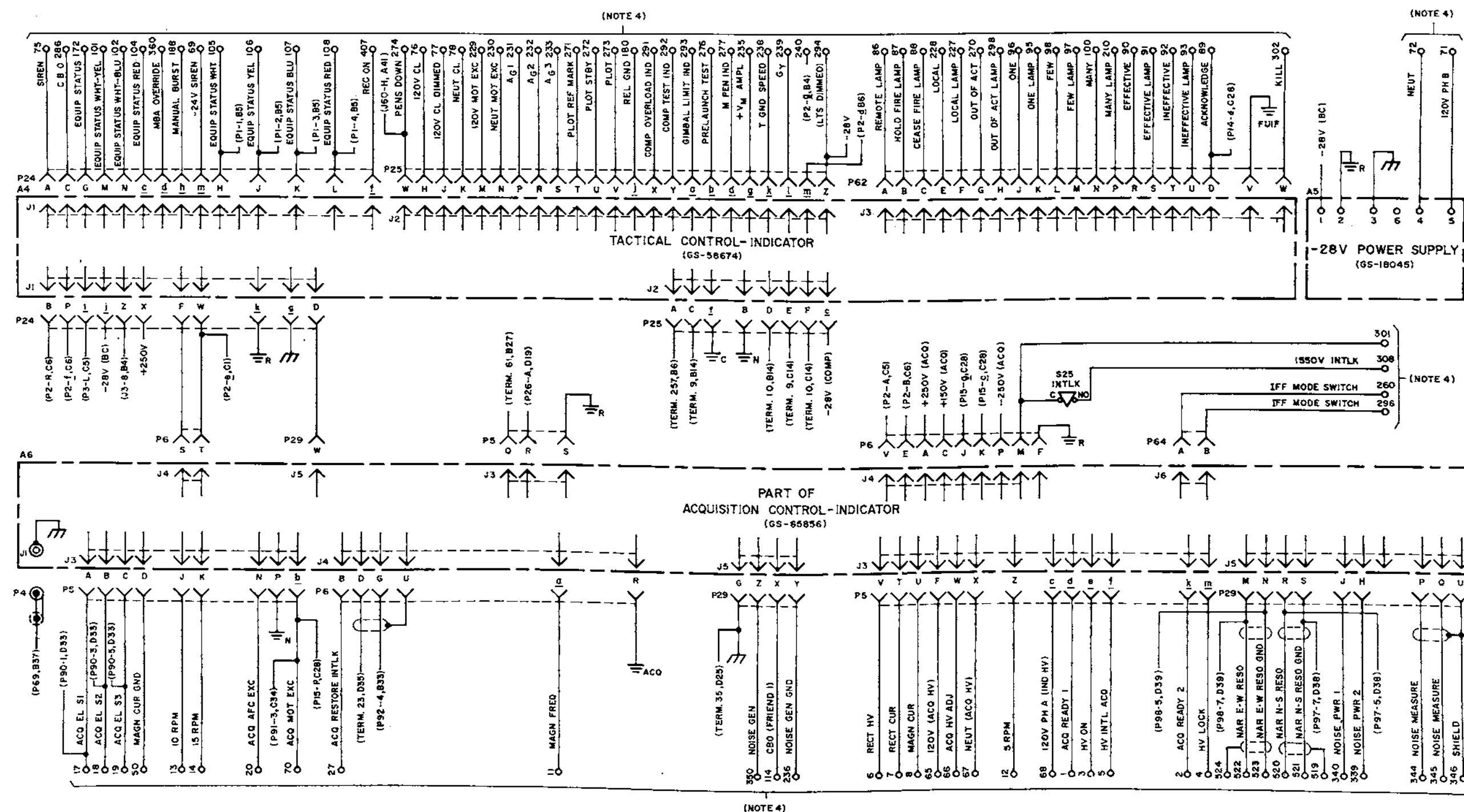
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**Figure 3.1 (U).** Battery control console 8173147—schematic diagram (with auxiliary acquisition radar modification) (sheet 1 of 9).

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**Figure 3.1 (U).** Continued (sheet 2 of 9).

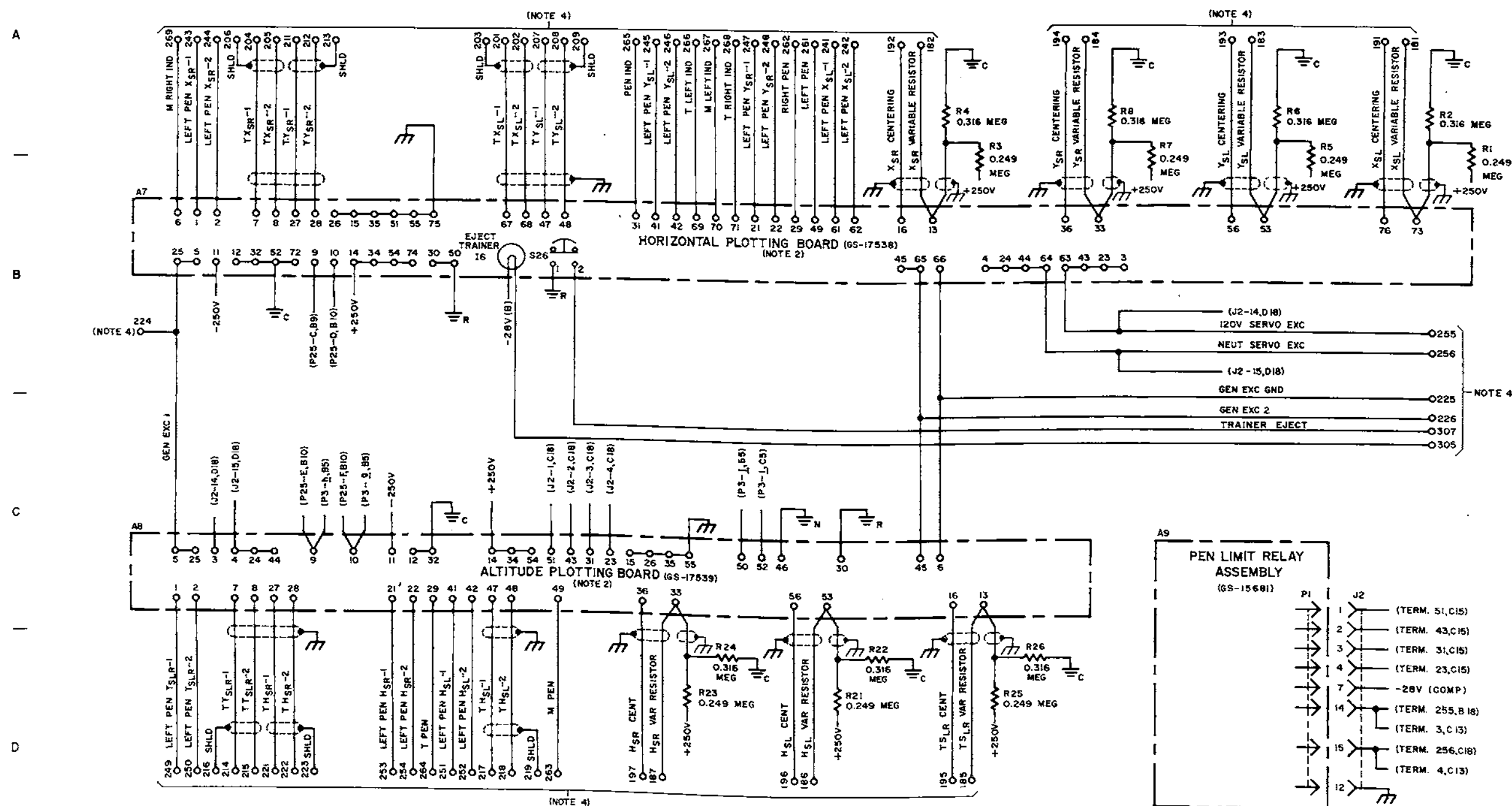


Figure 3.1 (U). Continued (sheet 3 of 9).

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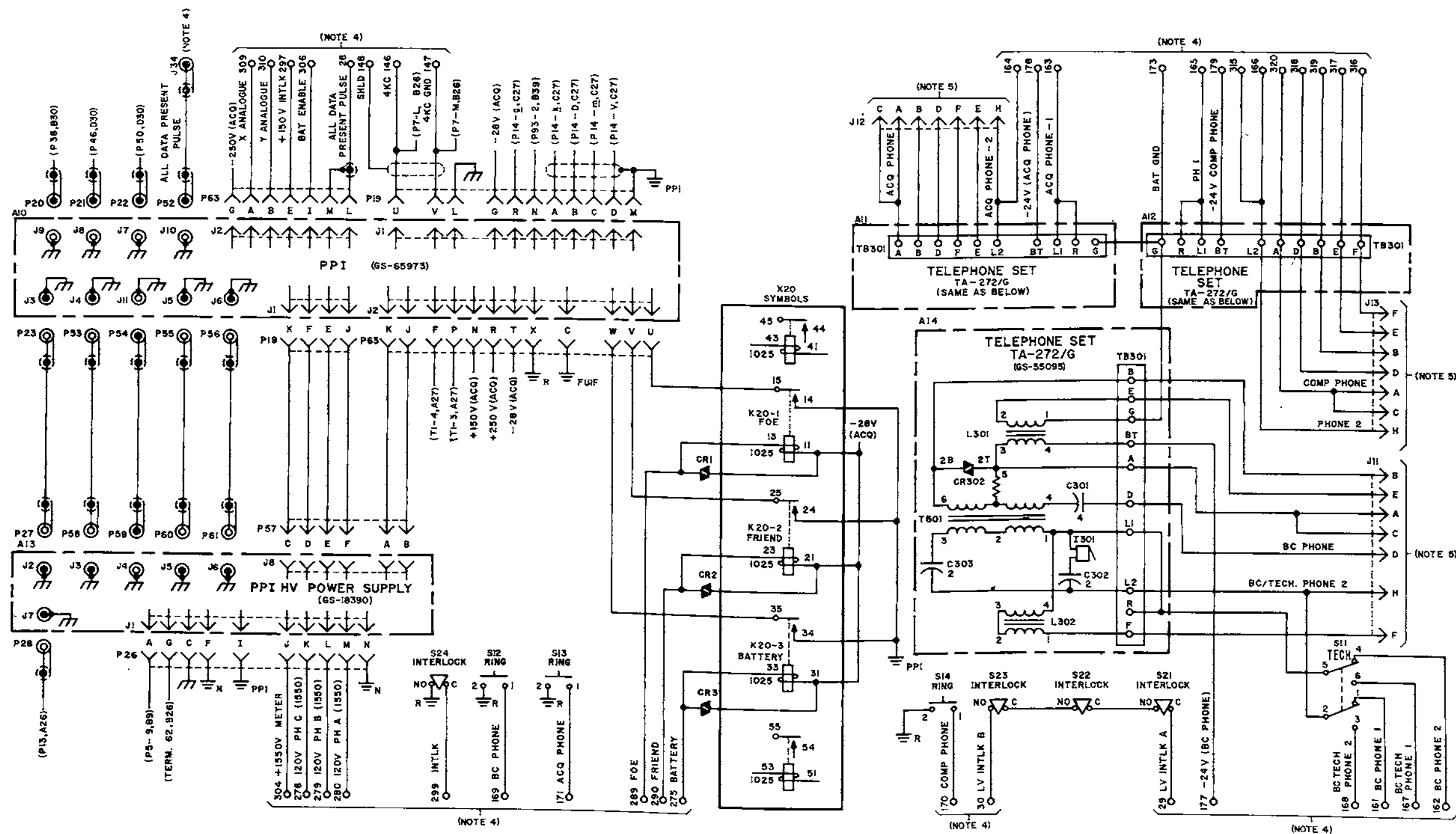


Figure 3.1 (U). Continued (sheet 4 of 9).

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ORD G82606

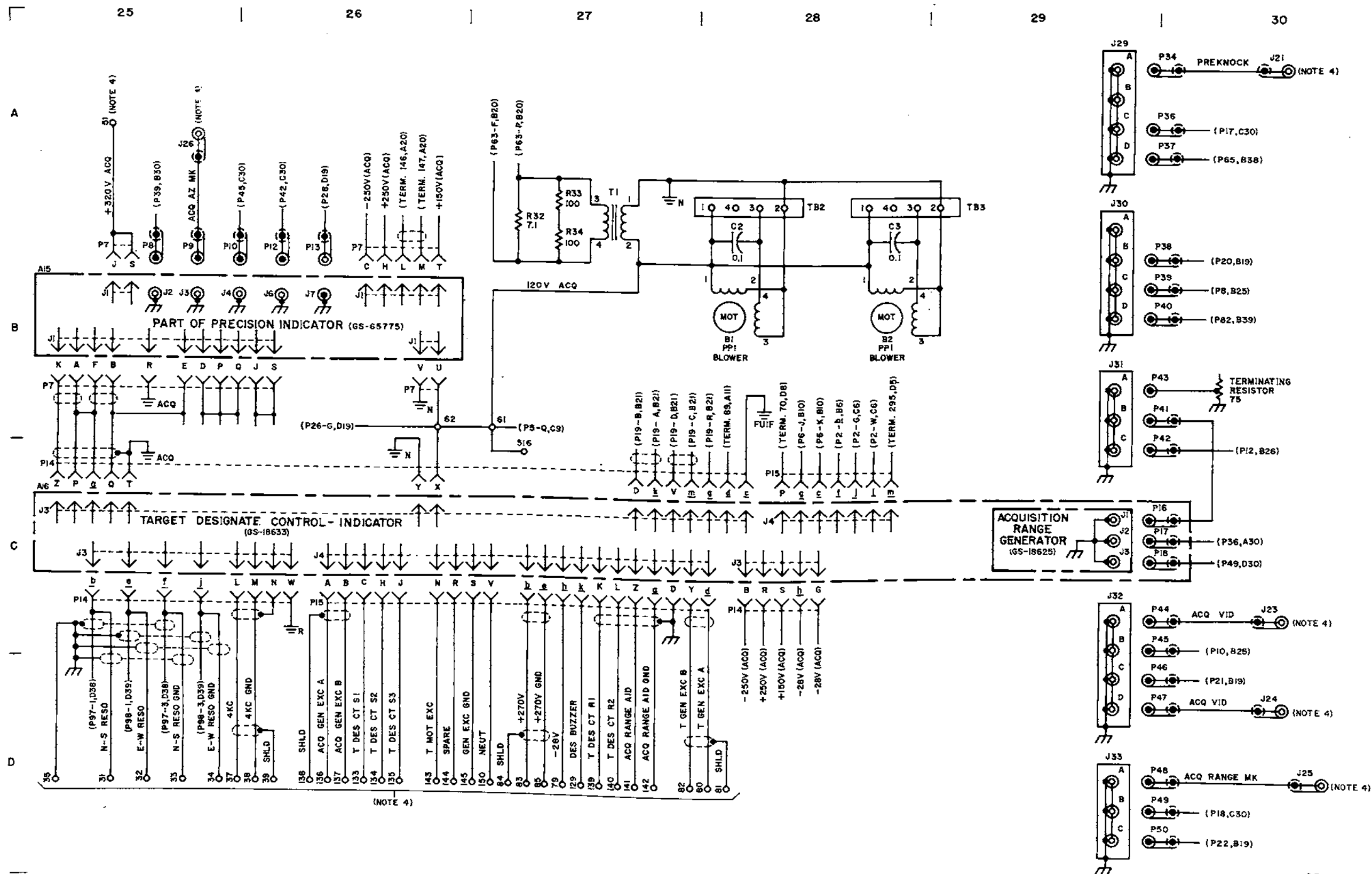


Figure 3.1 (U). Continued (sheet 5 of 9).

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ORD G82607

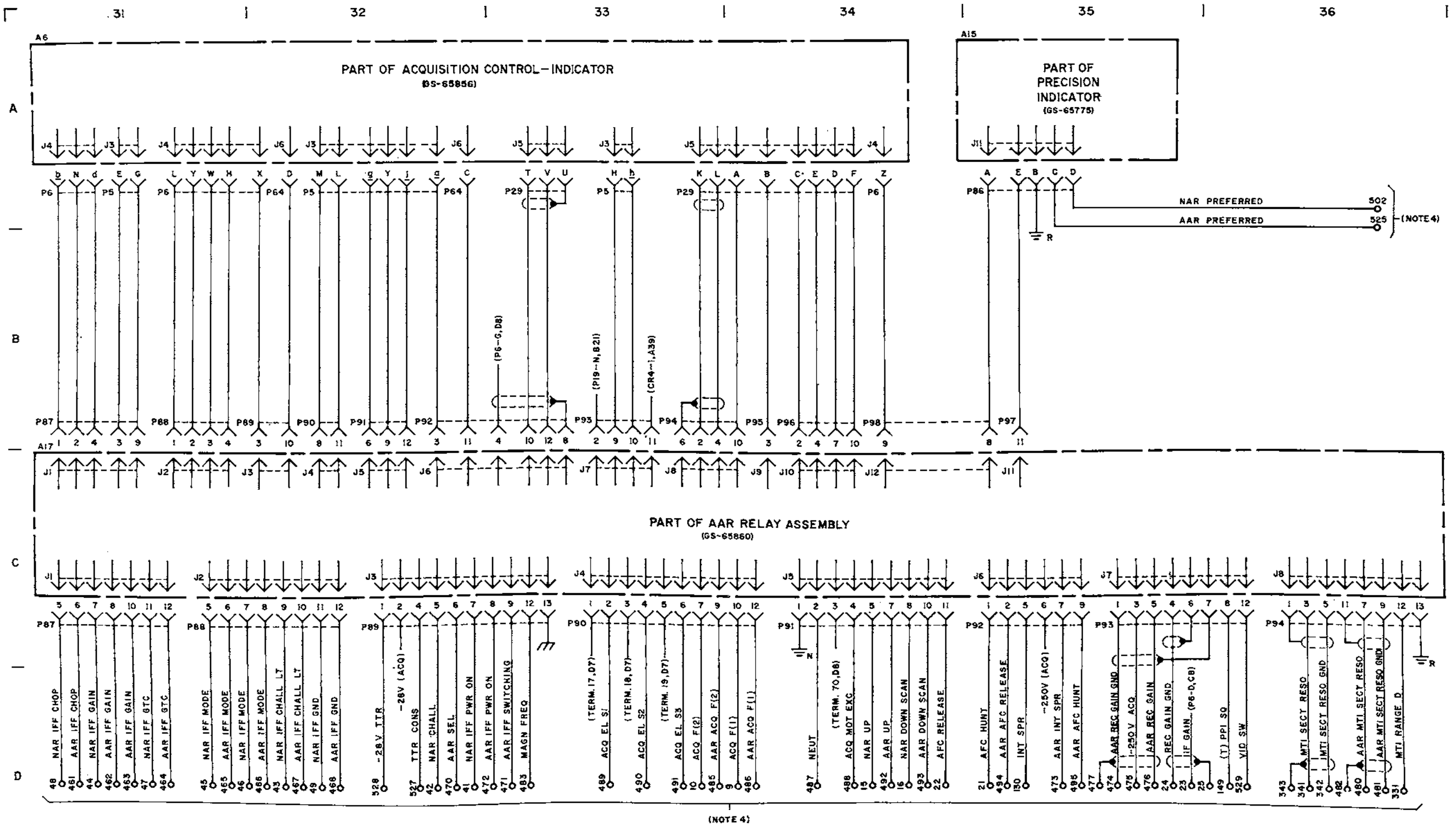


Figure 3.1 (U). Continued (sheet 6 of 9).

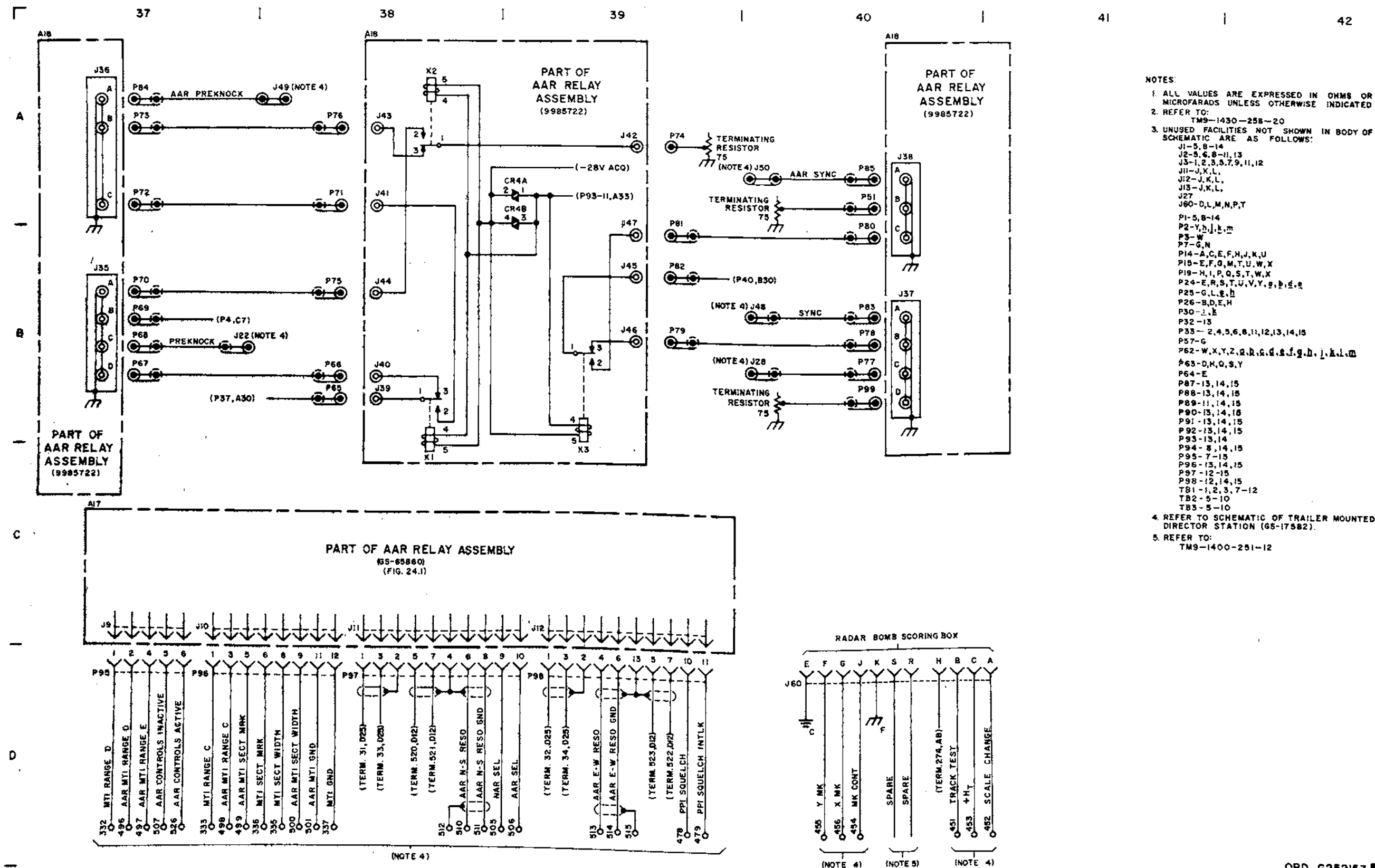
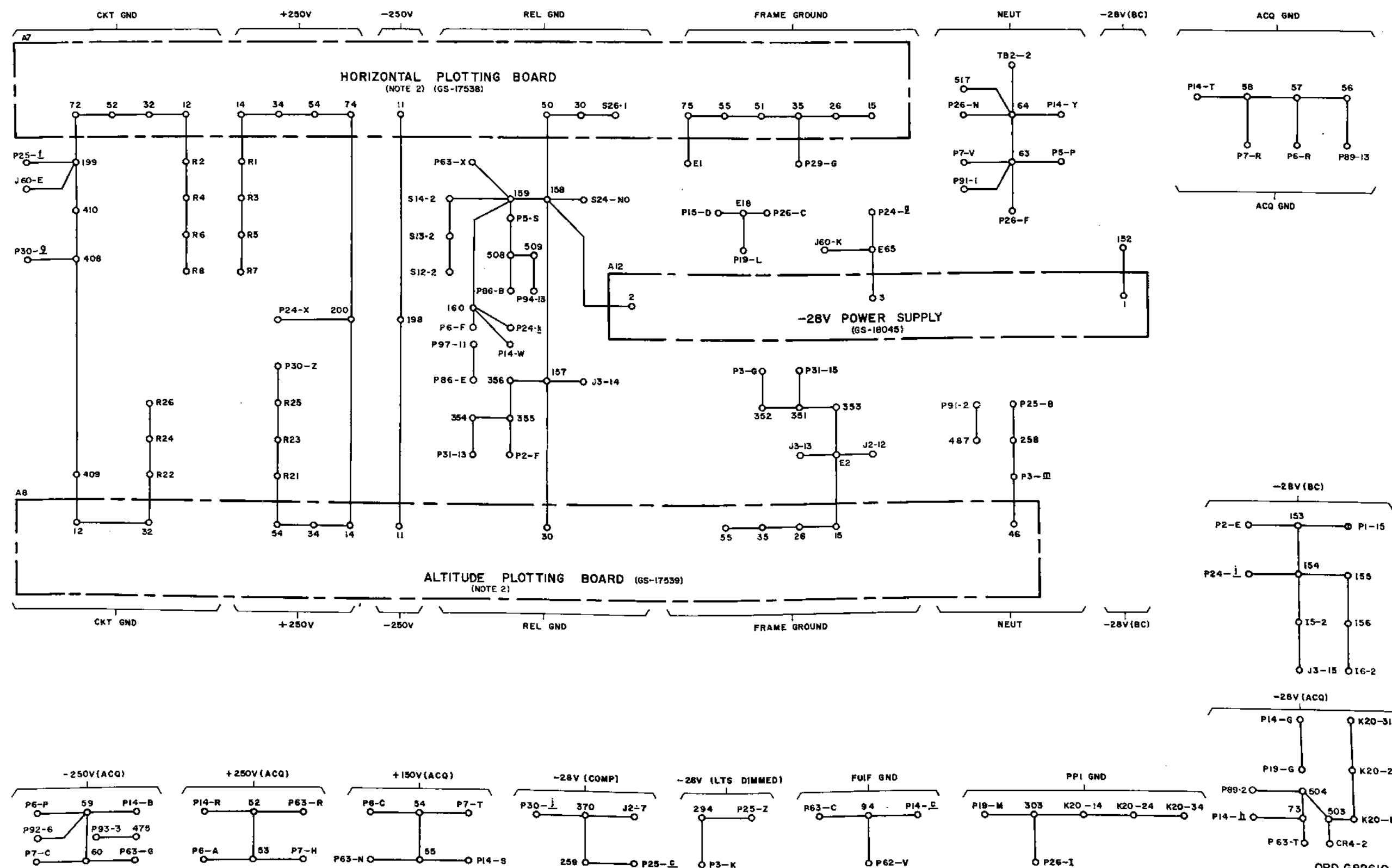


Figure 3.1 (U). Continued (sheet 7 of 9).





ORD G82610

Figure 3.1 (U). Continued (sheet 8 of 9).

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## INDEX OF TERMINALS

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	D11	55	A2	109	A4	163	A23	217	D14	271	A9	325	No Conn	379	D4	473	D35	527	D32
2	D11	56	D1	110	A3	164	A23	218	D14	272	A9	326	↑	380	D3	474	D35	528	D32
3	D11	57	D1	111	D5	165	A23	219	D15	273	A9	327	↑	381	No Conn	475	D35	529	D36
4	D11	58	D1	112	D5	166	A23	220	D3	274	A9	328	↓	382	No Conn	476	D35	530	No Conn
5	D11	59	D1	113	D5	167	D24	221	D14	275	D21	329	↓	383	D6	477	D35	531	↑
6	D10	60	D1	114	D10	168	D24	222	D14	276	A9	330	No Conn	384	D6	478	D39	532	↑
7	D10	61	B27	115	D3	169	D20	223	D14	277	A9	331	D36	385	D6	479	D39	533	↑
8	D10	62	B26	116	D3	170	D22	224	B13	278	D20	332	D37	386	D6	480	D36	534	↑
9	D34	63	B1	117	D3	171	D21	225	C18	279	D20	333	D37	387	A1	481	D36	535	↑
10	D33	64	B1	118	D3	172	A7	226	C18	280	D20	334	No Conn	388	A1	482	D36	536	↑
11	D9	65	D10	119	D3	173	A23	227	A10	281	D6	335	D37	389	A1	483	D33	537	↑
12	D11	66	D10	120	D3	174	No Conn	228	A10	282	D6	336	D37	390	A1	484	No Conn	538	↑
13	D7	67	D10	121	D3	175	No Conn	229	A8	283	D6	337	D38	391	No Conn	485	D33	539	↑
14	D7	68	D11	122	D4	176	No Conn	230	A9	284	D5	338	No Conn	392	No Conn	486	D34	540	No Conn
15	D34	69	A7	123	D4	177	D23	231	A9	285	D5	339	D12	393	No Conn	487	D34		
16	D34	70	D8	124	D4	178	A23	232	A9	286	A7	340	D12	394	D1	488	D34		
17	D7	71	A12	125	D5	179	A23	233	A9	287	No Conn	341	D36	395	D1	489	D33		
18	D7	72	A12	126	D3	180	A8	234	D2	288	D5	342	D36	396	D1	490	D33		
19	D7	73	A3	127	D3	181	A18	235	A10	289	D21	343	D36	397	D2	491	D33		
20	D8	74	D5	128	D3	182	A16	236	D10	290	D21	344	D12	398	D2	492	D34		
21	D35	75	A7	129	D27	183	A17	237	No Conn	291	A9	345	D12	399	D2	493	D34		
22	D34	76	A8	130	D35	184	A17	238	A10	292	A9	346	D12	400	D2	494	D35		
23	D35	77	A8	131	D5	185	D16	239	A10	293	A9	347	No Conn	401	D2	495	D35		
24	D35	78	A8	132	No Conn	186	D16	240	A10	294	A10	348	No Conn	402	D2	496	D37		
25	D36	79	D27	133	D26	187	D15	241	A16	295	D5	349	No Conn	403	D2	497	D37		
26	No Conn	80	D28	134	D26	188	A7	242	A16	296	C12	350	D9	404	D2	498	D37		
27	D8	81	D28	135	D26	189	No Conn	243	A13	297	A20	351	C1	405	D2	499	D37		
28	A20	82	D27	136	D26	190	D5	244	A13	298	A11	352	C1	406	No Conn	500	D38		
29	D23	83	D27	137	D26	191	A18	245	A15	299	D20	353	C1	407	A8	501	D38		
30	D22	84	D27	138	D26	192	A16	246	A15	300	No Conn	354	A1	408	B1	502	A36		
31	D25	85	D27	139	D27	193	A17	247	A15	301	B12	355	A1	409	B1	503	A3		
32	D25	86	A10	140	D27	194	A17	248	A16	302	A12	356	A1	410	B1	504	A3		
33	D25	87	A10	141	D27	195	D16	249	D13	303	C1	357	A3	451	D40	505	D39		
34	D25	88	A10	142	D27	196	D16	250	D13	304	D20	358	A3	452	D41	506	D39		
35	D25	89	A11	143	D26	197	D15	251	D14	305	C18	359	A3	453	D40	507	D37		
36	No Conn	90	A11	144	D27	198	A3	252	D14	306	A20	360	A7	454	D40	508	A1		
37	D26	91	A11	145	D27	199	B1	253	D14	307	C18	361	D2	455	D40	509	A1		
38	D26	92	A11	146	A20	200	A3	254	D14	308	B12	362	No Conn	456	D40	510	D38		
39	D26	93	A11	147	A20	201	A14	255	B18	309	A19	363	D2	457	No Conn	511	D38		
40	A2	94	B1	148	A20	202	A15	256	B18	310	A20	364	A4	458	↑	512	D38		
41	D32	95	A11	149	D36	203	A14	257	B6	311	A3	365	A2	459	↑	513	D39		
42	D32	96	A11	150	D27	204	A13	258	B1	312	No Conn	366	A4	460	No Conn	514	D39		
43	D32	97	A11	151	No Conn	205	A14	259	A2	313	No Conn	367	A2	461	D31	515	D39		
44	D31	98	A11	152	A3	206	A13	260	C12	314	No Conn	368	A2	462	D31	516	C27		
45	D31	99	A5	153	A4	207	A15	261	A16	315	A23	369	A2	463	D31	517	B1		
46	D31	100	A11	154	A4	208	A15	262	A16	316	A24	370	A2	464	D31	518	No Conn		
47	D31	101	A7	155	A4	209	A15	263	D15	317	A24	371	D4	465	D31	519	D12		
48	D31	102	A7	156	A4	210	A11	264	D14	318	A24	372	D4	466	D32	520	D12		
49	D32	103	D5	157	A1	211	A14	265	A15	319	A24	373	D4	467	D32	521	D12		
50	D7	104	A7	158	A1	212	A14	266	A15	320	A24	374	D4	468	D32	522	D12		
51	A25	105	A7	159	A1	213	A14	267	A15	321	No Conn	375	D4	469	No Conn	523	D12		
52	D1	106	A7	160	A1	214	D13	268	A15	322	↑	376	D4	470	D32	524	D11		
53	D1	107	A8	161	D24	215	D13	269	A13	323	↑	377	D4	471	D33	525	A36		
54	A2	108	A8	162	D24	216	D13	270	A10	324	No Conn	378	D4	472	D33	526	D37		

Figure 3.1 (U). Continued (sheet 9 of 9).

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(U) Battery Control Console 8173147—Apparatus List (With Auxiliary Acquisition Radar Modification)

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol $\pm$ %	Watts	Volts		
A1					9154880	GS-18143
A2					8012372	GS-15712
A3					9155164	GS-19269
A4					9142894	GS-58674
A5					9986424	GS-18045
A6					9985604	GS-66856
A7					8171900	GS-17538
A8					8171886	GS-17539
A9					8009616	GS-15681
A10					9988576	GS-65973
A11					8010134	GS-55095
A12					8010134	GS-55095
A13					9142872	GS-18390
A14					8010134	GS-55095
C301	4	10		600	7593727	
C302	2	10		600	7593726	
C303	2	10		600	7593726	
CR302					8024363	
I301	650 ohm	5			7653456	
L301					8007179	
L302					8007179	
T301					8175113	
A15					9985665	GS-65775
A16					9007683	GS-18633
A17					9985525	GS-65860
A18					9985722	None
CR4					8515017	
J35					9003874	
J36					9003874	
J37					9003874	
J38					9003874	
K1					9001042	
K2					9001042	
K3					9001042	
P74					7601757	
B1					7599786	
B2					7599786	
C1	0.1	10		200	7599189	
C2	0.1	10		600	7631683	
C3	0.1	10		600	7631683	
CR1					8024680	
CR2					8024680	
CR3					8024680	
I1					572994	
I2					572994	
I3					572994	
I4					572994	
I5					7599913	
J1					7598934	
J2					7599367	
J3					7599367	
J11					8175623	
J12					8175623	
J13					8175623	
J21					7599662	
J22					7599662	
J23					7599662	

(U) Battery Control Console 8173147—Apparatus List (With Auxiliary Acquisition Radar Modification)—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol $\pm$ %	Watts	Volts		
J24					7599662	
J25					7599662	
J26					7599662	
J28					7599662	
J29					9003874	
J30					9003874	
J31					8519232	
J32					9003874	
J33					8519232	
J34					MS35181	
J48					7599662	
J49					7599662	
J50					7599662	
J60					9150653	
K20					9004095	
LS1					8011143	
P1					7605564	
P2					9003915	
P3					9003509	
P4					7602336	
P5					9007252	
P6					8526289	
P7					9003507	
P8					MS35170	
P9					MS35170	
P10					MS35170	
P12					MS35170	
P13					7602334	
P14					9003508	
P15					9003330	
P16					MS35170	
P17					MS35170	
P18					MS35170	
P19					9003504	
P20					MS35170	
P21					MS35170	
P22					MS35170	
P23					7602334	
P24					9007251	
P25					9003393	
P26					9007165	
P27					7602334	
P28					7602334	
P29					9003462	
P30					9003330	
P31					7605564	
P32					7605564	
P33					7605564	
P34					MS35170	
P36					MS35170	
P37					MS35170	
P38					MS35170	
P39					MS35170	
P40					MS35170	
P41					MS35170	
P42					MS35170	

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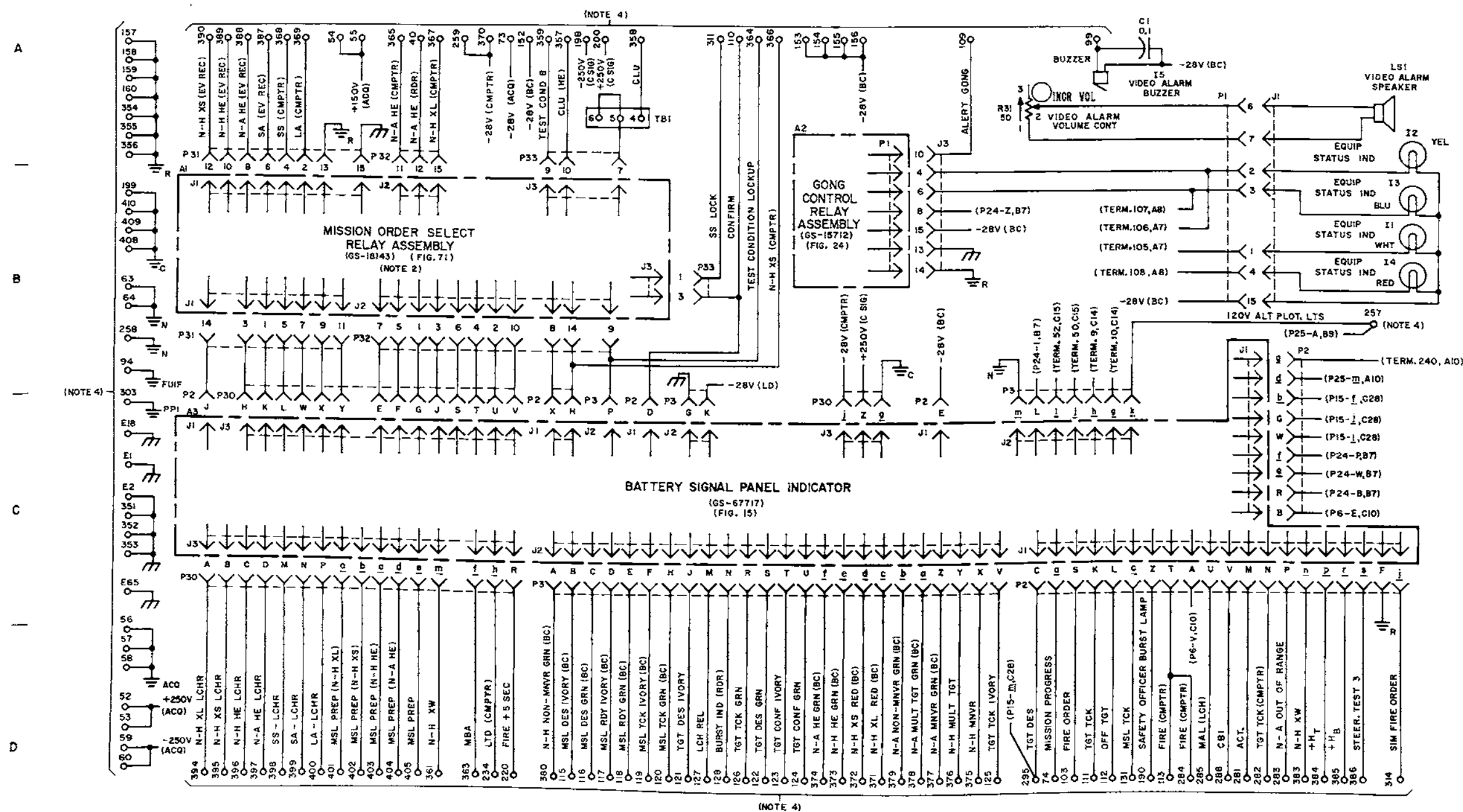
(U) Battery Control Console 8173147—Apparatus List (With Auxiliary Acquisition  
Radar Modification)—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
P43					7601757	
P44					MS35170	
P45					MS35170	
P46					MS35170	
P47					MS35170	
P48					MS35170	
P49					MS35170	
P50					MS35170	
P51					7601757	
P52					MS35170	
P53					7602334	
P54					9009436	
P55					7602334	
P56					7602334	
P57					9007263	
P58					7602334	
P59					9009436	
P60					7602334	
P61					7602334	
P62					9016933	
P63					9011102	
P64					9007241	
P65					MS35170	
P66					MS35170	
P67					MS35170	
P68					MS35170	
P69					MS35170	
P70					MS35170	
P71					MS35170	
P72					MS35170	
P73					MS35170	
P75					MS35170	
P76					MS35170	
P77					MS35170	
P78					MS35170	
P79					MS35170	
P80					MS35170	
P81					MS35170	
P82					MS35170	
P83					MS35170	
P84					MS35170	
P85					MS35170	
P86					9007241	

(U) Battery Control Console 8173147—Apparatus List (With Auxiliary Acquisition  
Radar Modification)—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
P87					7605564	
P88					7605564	
P89					7605564	
P90					7605564	
P91					7605564	
P92					7605564	
P93					7605564	
P94					7605564	
P95					7605564	
P96					7605564	
P97					7605564	
P98					7605564	
R1	0.249 meg	1	1		7599636	
R2	0.316 meg	1	1		7599747	
R3	0.249 meg	1	1		7599636	
R4	0.316 meg	1	1		7599747	
R5	0.249 meg	1	1		7599636	
R6	0.316 meg	1	1		7599747	
R7	0.249 meg	1	1		7599636	
R8	0.316 meg	1	1		7599747	
R21	0.249 meg	1	1		7599636	
R22	0.316 meg	1	1		7599747	
R23	0.249 meg	1	1		7599636	
R24	0.316 meg	1	1		7599747	
R25	0.249 meg	1	1		7599636	
R26	0.316 meg	1	1		7599747	
R31	50 ohm	10	2		9004097	
R32	7.1 ohm	5	11		9009488	
R33	100 ohm	5	½		MS35043-63	
R34	100 ohm	5	½		MS35043-63	
S11					9001495	
S12					7602615	
S13					7602615	
S14					7602615	
S21					7602749	
S22					7602749	
S23					7602749	
S24					7602749	
S25					7602749	
T1					8015382	
TB1					9004457	
TB2					7634156	
TB3					7334156	

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Figure 3.2 (U). Battery control console 8173147 (with antijam display capability)—schematic diagram (sheet 1 of 8) (U).

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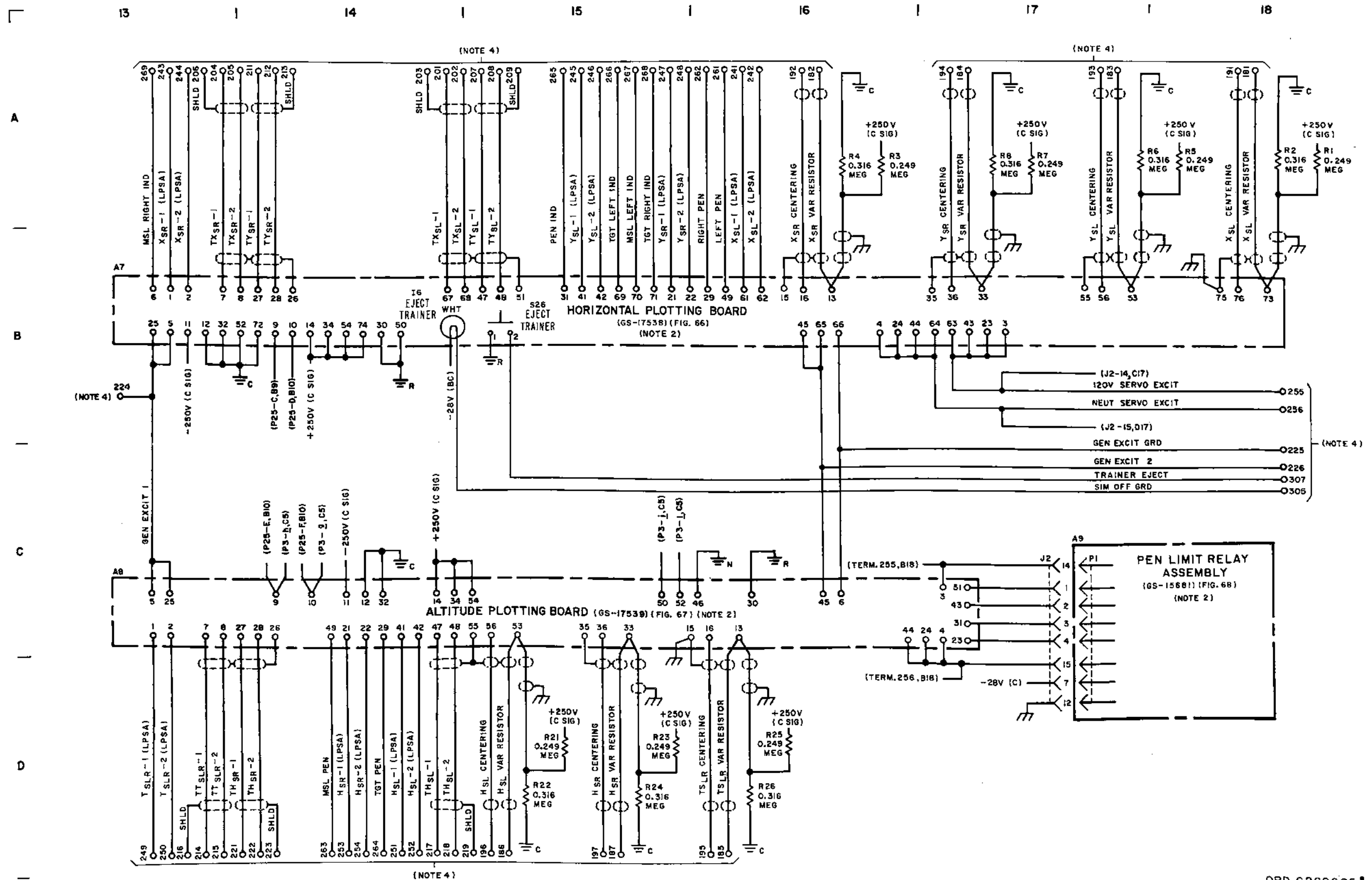
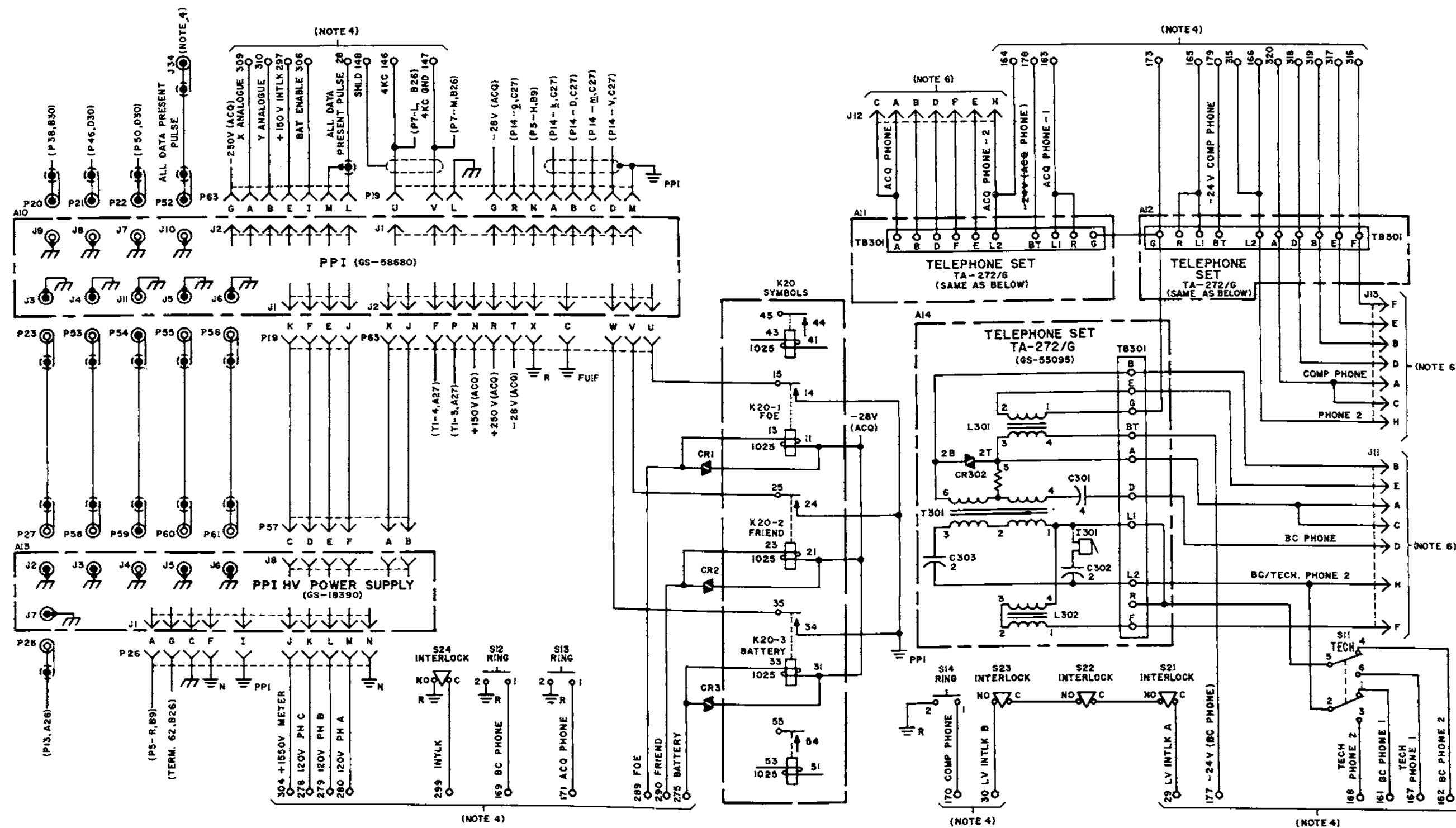


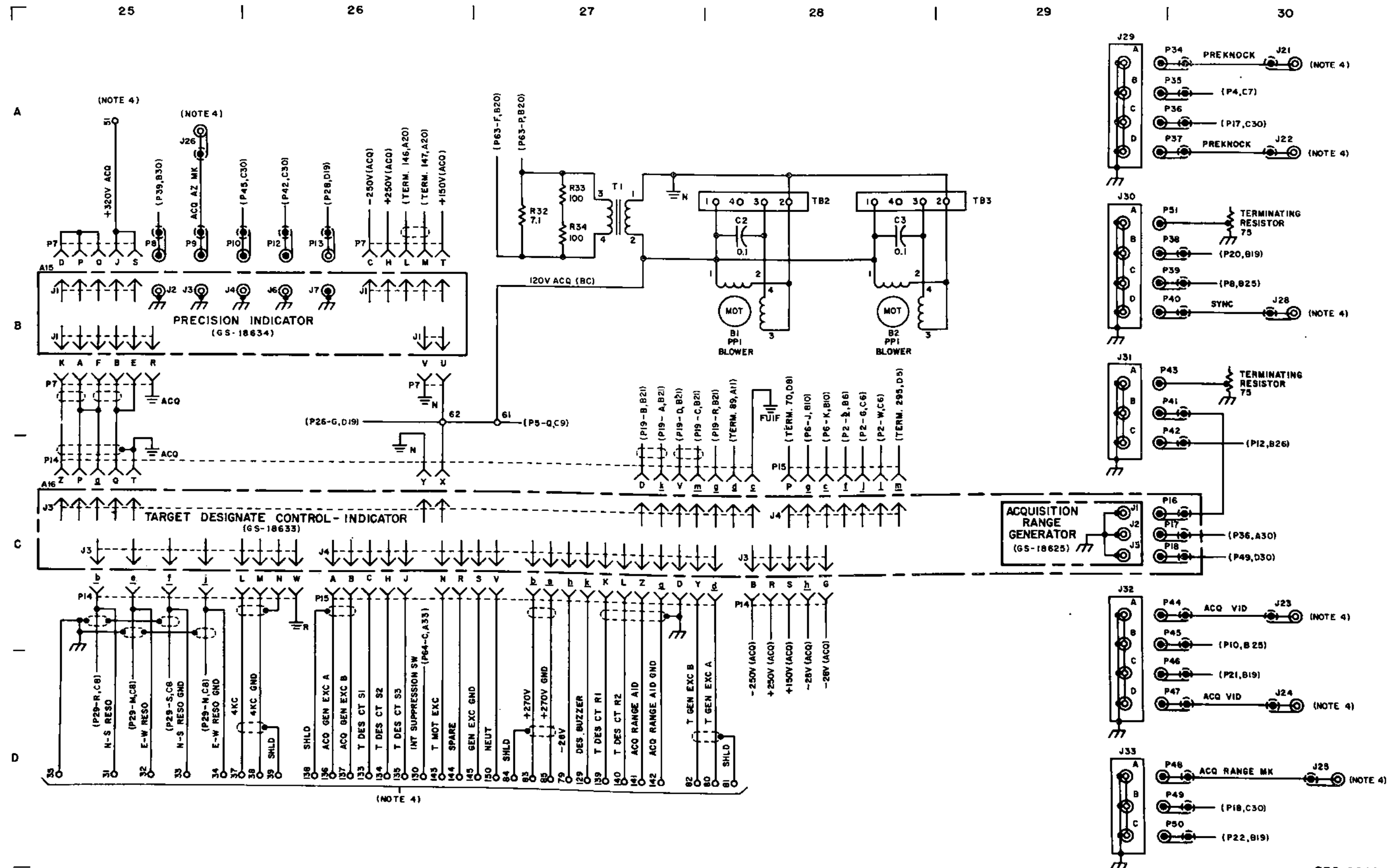
Figure 3.2 (U). Continued (sheet 3 of 8).

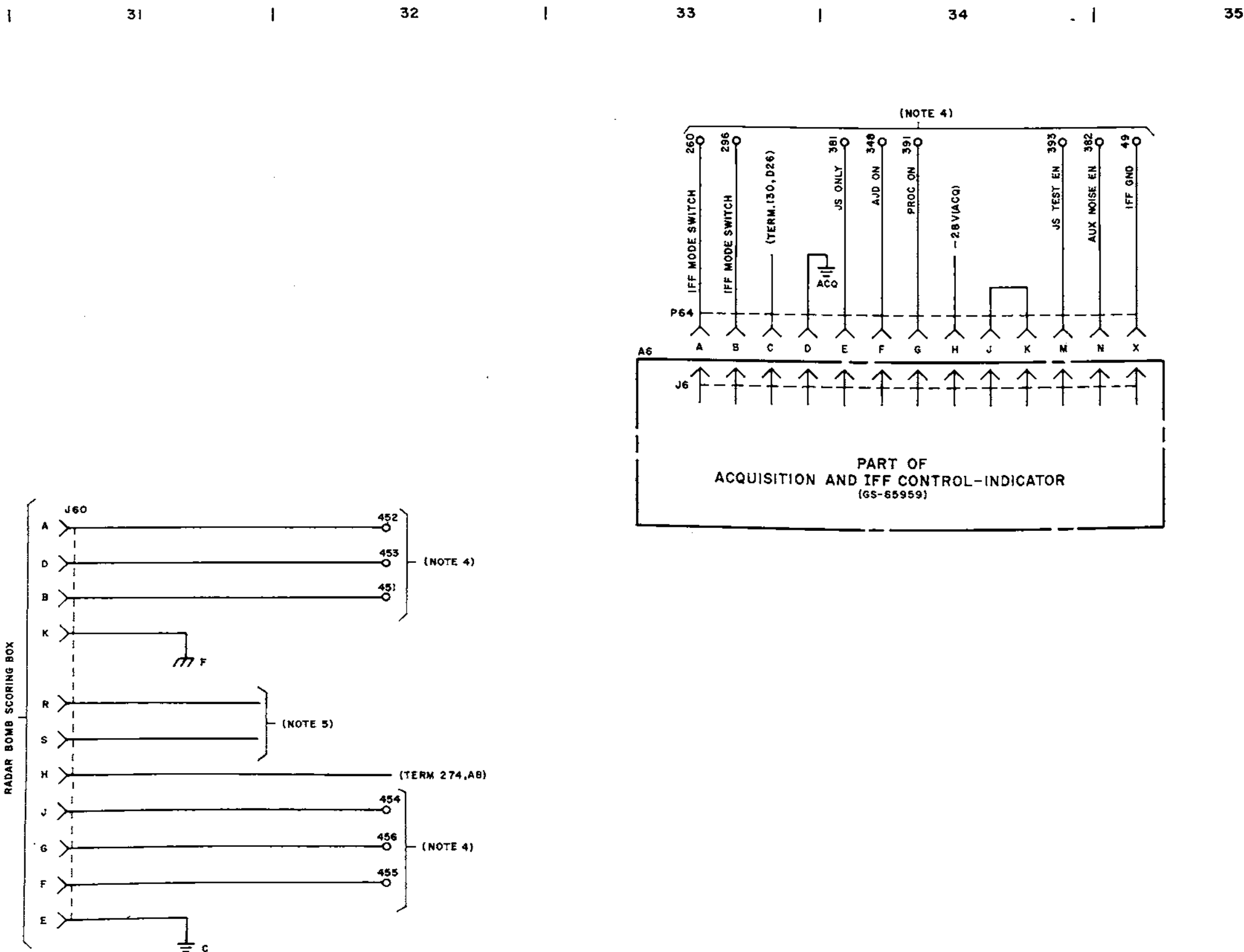
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ORD G269605









- NOTES:
- ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
  - REFER TO TM9-1430-258-20
  - UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:
    - J1-5, 8-14
    - J2-5, 6, 8-11, 13
    - J3-1, 2, 3, 5, 7, 9, 11, 12
    - J11-J, K, L
    - J12-J, K, L
    - J13-J, K, L
    - J60-C, L, M, N, P, Q
    - P1-5, 8-14
    - P2-Y, b, j, k, m
    - P3-W
    - P7-G, N
    - P14-A, C, E, F, H, J, K, U
    - P15-E, F, G, T, U, W, X
    - P19-H, I, P, Q, S, T, W, X
    - P24-E, R, S, T, U, V, Y, g, b, e
    - P25-G, L, s, h
    - P26-B, D, E, H
    - P30-i, k
    - P32-13
    - P33-2, 4, 5, 6, 8, 11, 12, 13, 14, 15
    - P57-G
    - P62-W, X, Y, Z, c, b, e, d, g, f, g, h, i, k, l, m
    - P63-D, H, Q, S, Y
    - P64-L, P, Q, R, S, T, U, V, W, Y, Z
    - TB1-1, 2, 3, 7, 8, 9, 10, 11, 12
    - TB2-5, 6, 7, 8, 9, 10
    - TB3-5, 6, 7, 8, 9, 10
  - REFER TO SCHEMATIC OF TRAILER MOUNTED DIRECTOR STATION (GS-17582)
  - FOR FUTURE CONNECTION TO TELEPHONE CIRCUITS.
  - REFER TO TM9-1400-251-12

Figure 3.2 (U). Continued (sheet 6 of 8).

ORD G82901

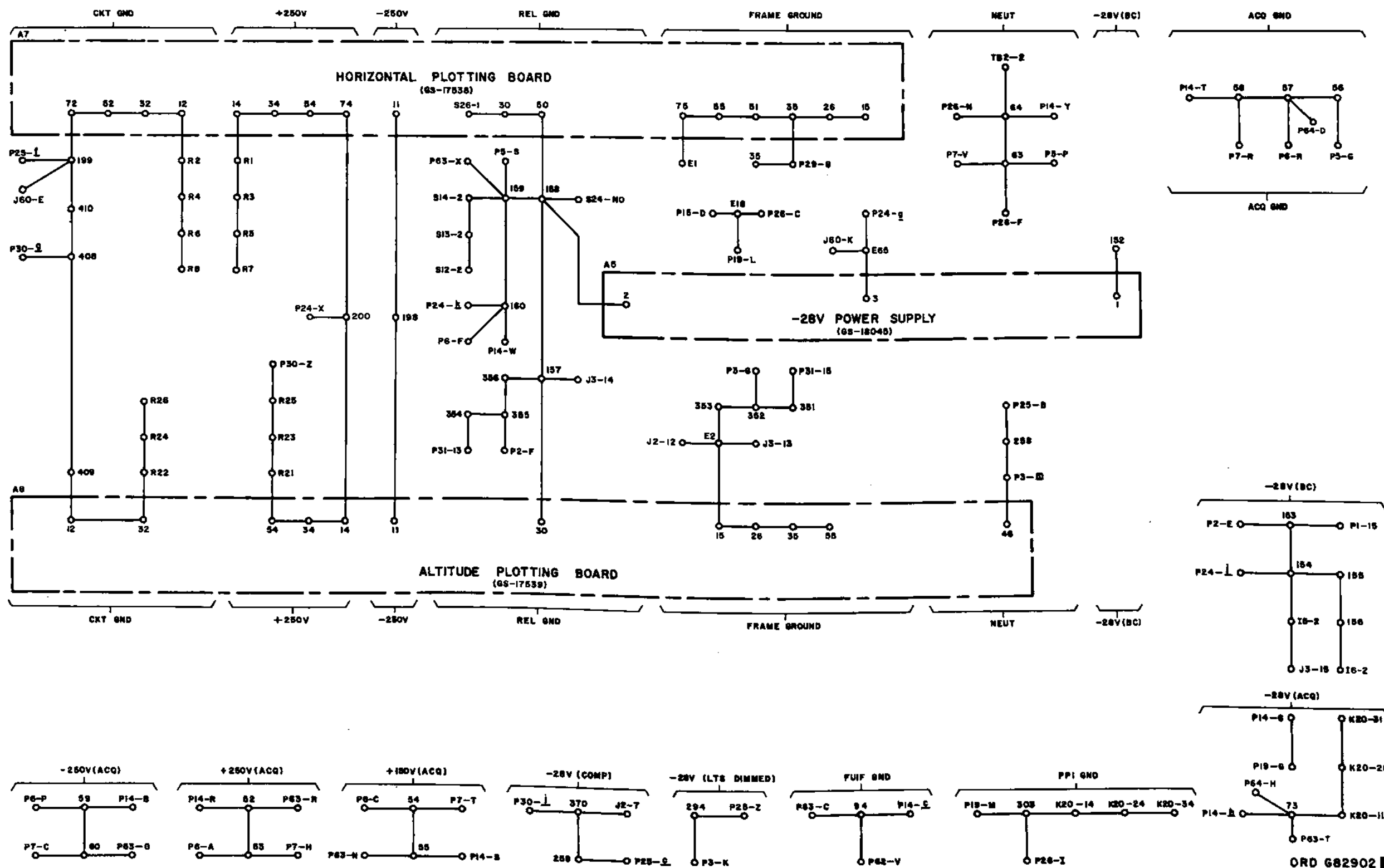


Figure 3.2 (U). Continued (sheet 7 of 8).

INDEX OF TERMINALS															
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	D11	55	A2	109	A4	163	A23	217	D14	271	A9	325	No Conn	379	D4
2	D11	56	D1	110	A3	164	A23	218	D14	272	A9	326	↑	380	D3
3	D11	57	D1	111	D5	165	A23	219	D15	273	A9	327	↓	381	No Conn
4	D11	58	D1	112	D5	166	A23	220	D3	274	A9	328	↓	382	A35
5	D11	59	D1	113	D5	167	D24	221	D14	275	D21	329	↓	383	D6
6	D10	60	D1	114	D10	168	D24	222	D14	276	A9	330	No Conn	384	D6
7	D10	61	B27	115	D3	169	D20	223	D14	277	A9	331	↑	385	D6
8	D10	62	B26	116	D3	170	D22	224	B13	278	D20	332	↓	386	D6
9	No Conn	63	B1	117	D3	171	D21	225	C18	279	D20	333	↓	387	A1
10	No Conn	64	B1	118	D3	172	A7	226	C18	280	D20	334	NO CONN	388	A1
11	D9	65	D10	119	D3	173	A23	227	A10	281	D6	335	↑	389	A1
12	D11	66	D10	120	D3	174	No Conn	228	A10	282	D6	336	↓	390	A1
13	D7	67	D10	121	D3	175	No Conn	229	A8	283	D6	337	↓	391	A34
14	D7	68	D11	122	D4	176	No Conn	230	A9	284	D5	338	No Conn	392	No Conn
15	No Conn	69	A7	123	D4	177	D23	231	A9	285	D5	339	D12	393	A34
16	No Conn	70	D8	124	D4	178	A23	232	A9	286	A7	340	D12	394	D1
17	D7	71	A12	125	D5	179	A23	233	A9	287	No Conn	341	No Conn	395	D1
18	D7	72	A12	126	D3	180	A8	234	D2	288	D5	342	D12	396	D1
19	D7	73	A3	127	D3	181	A18	235	A10	289	D21	343	D12	397	D2
20	D8	74	D5	128	D3	182	A16	236	D10	290	D21	344	D12	398	D2
21	No Conn	75	A7	129	D27	183	A17	237	No Conn	291	A9	345	D12	399	D2
22	↑	76	A8	130	D26	184	A17	238	A10	292	A9	346	D12	400	D2
23	↓	77	A8	131	D5	185	D16	239	A10	293	A9	347	No Conn	401	D2
24	↓	78	A8	132	No Conn	186	D16	240	A10	294	A10	348	A34	402	D2
25	No Conn	79	D27	133	D26	187	D15	241	A16	295	D5	349	No Conn	403	D2
26	No Conn	80	D28	134	D26	188	A7	242	A16	296	A33	350	D9	404	D2
27	D8	81	D28	135	D26	189	No Conn	243	A13	297	A20	351	C1	405	D2
28	A20	82	D27	136	D26	190	D5	244	A13	298	A11	352	C1	406	No Conn
29	D23	83	D27	137	D26	191	A18	245	A15	299	D20	353	C1	407	A8
30	D22	84	D27	138	D26	192	A16	246	A15	300	No Conn	354	A1	408	B1
31	D25	85	D27	139	D27	193	A17	247	A15	301	B12	355	A1	409	B1
32	D25	86	A10	140	D27	194	A17	248	A16	302	A12	356	A1	410	B1
33	D25	87	A10	141	D27	195	D16	249	D13	303	C1	357	A3		
34	D25	88	A10	142	D27	196	D16	250	D13	304	D20	358	A3		
35	D25	89	A11	143	D26	197	D15	251	D14	305	No Conn	359	A3		
36	No Conn	90	A11	144	D27	198	A3	252	D14	306	A20	360	A7		
37	D26	91	A11	145	D27	199	B1	253	D14	307	No Conn	361	D2		
38	D26	92	A11	146	A20	200	A3	254	D14	308	B12	362	No Conn		
39	D26	93	A11	147	A20	201	A14	255	B18	309	C18	363	D2		
40	A2	94	B1	148	A20	202	A15	256	B18	310	C18	364	A4	451	C32
41	No Conn	95	A11	149	No Conn	203	A14	257	B6	311	A3	365	A2	452	C32
42	↑	96	A11	150	D27	204	A13	258	B1	312	No Conn	366	A4	453	C32
43	↓	97	A11	151	No Conn	205	A14	259	A2	313	No Conn	367	A2	454	D32
44	↓	98	A11	152	A3	206	A13	260	A33	314	No Conn	368	A2	455	D32
45	↓	99	A5	153	A4	207	A15	261	A16	315	A23	369	A2	456	D32
46	↓	100	A11	154	A4	208	A15	262	A16	316	A24	370	A2		
47	↓	101	A7	155	A4	209	A15	263	D15	317	A24	371	D4	519	D12
48	↓	102	A7	156	A4	210	A11	264	D14	318	A24	372	D4	520	D12
49	A35	103	D5	157	A1	211	A14	265	A15	319	A24	373	D4	521	D12
50	D7	104	A7	158	A1	212	A14	266	A15	320	A24	374	D4	522	D12
51	A25	105	A7	159	A1	213	A14	267	A15	321	No Conn	375	D4	523	D12
52	D1	106	A7	160	A1	214	D13	268	A15	322		376	D4	524	D12
53	D1	107	A8	161	D24	215	D13	269	A13	323		377	D4		
54	A2	108	A8	162	D24	216	D13	270	A10	324	No Conn	378	D4		

Figure 3.2 (U). Continued (sheet 8 of 8).

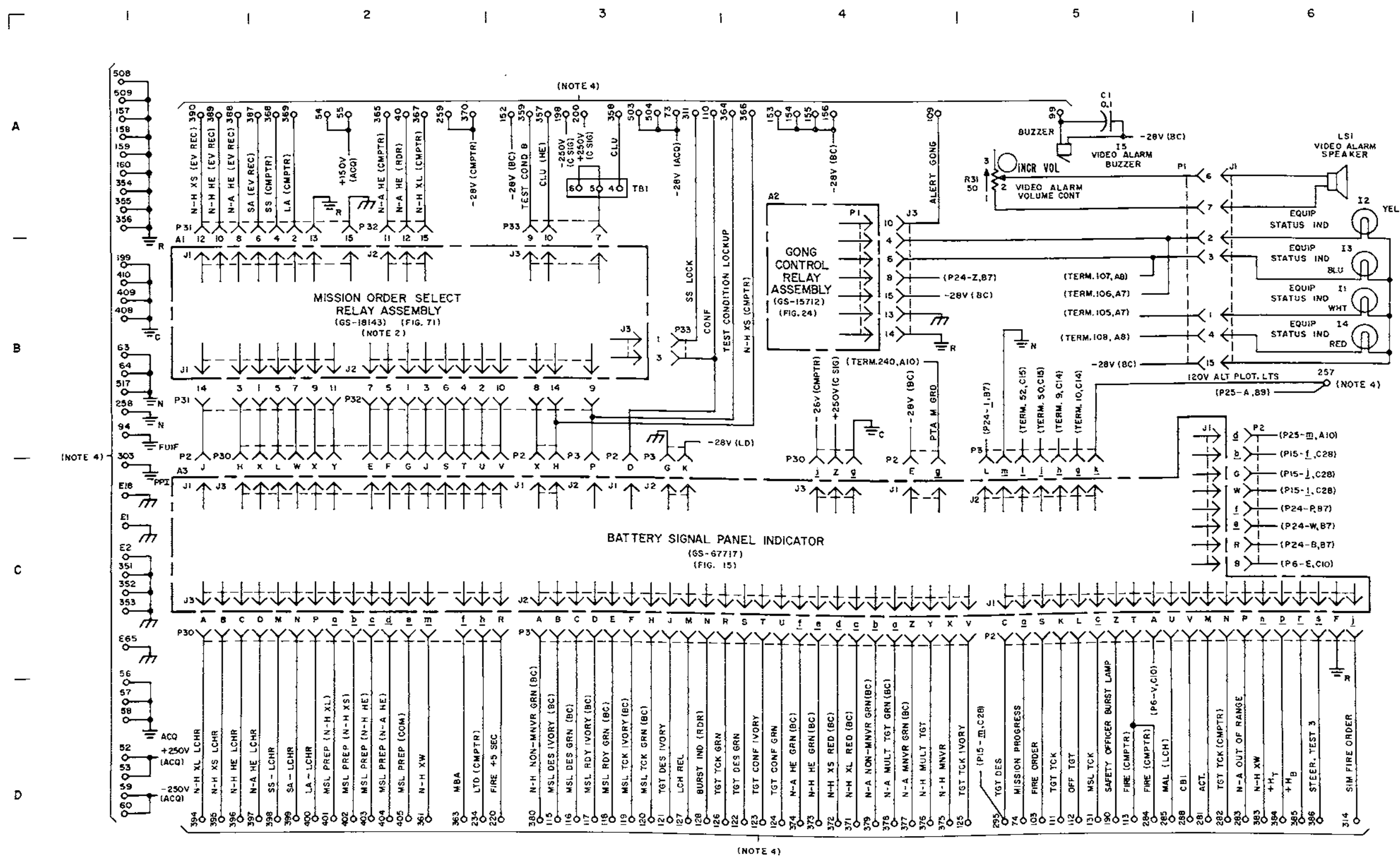
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(U) Battery Control Console 8173147 (With Antijam Display Capability)—Apparatus List

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
A1					9154880	GS-18143
A2					8012372	GS-15712
A3					10184906	GS-67717
A4					9986427	GS-58674
A5					9986524	GS-18045
A6					9988650	GS-65959
A7					8171900	GS-17538
A8					8171886	GS-17539
A9					8009615	GS-15681
A10					9988576	GS-65892
A11, A12					8010134	GS-55095
A13					9142872	GS-18390
A14					8010134	GS-55095
C301	4 $\mu$ f	±10		600	7593727	CP70B1EF405H
C302	2 $\mu$ f	±10		600	7593726	CP70B1EF205H
C303	2 $\mu$ f	±10		600	7593726	CP70B1EF205H
CR302					8024363	
I301	650 ohm	±5			7653456	
L301					8007179	
L302					8007179	
T301					8175113	
A15					9985665	GS-18634
A16					9986487	
B1, B2					7599786	
C1	0.1 $\mu$ f	±10		200	7599189	
C2, C3	0.1 $\mu$ f	±10		600	7631683	
CR1 thru CR3					WECO	G221549
I1 thru I4			75	125	8175448	
I5					7599913	
I6					572994	
J1					7598934	
J2, J3					7599367	
J11 thru J13					8175623	
J21 thru J26					7599662	
J28					7599662	
J29, J30					9003874	
J31					8519232	
J32					9003874	
J33					8519232	
J34					MS35181	
J60					MS3102A20	
K20					9004095	
LS1					8011143	
P1					7605564	
P2					MS3106A28-21S	
P3					MS3106A28-15SW	
P4					7602336	
P5					MS3108B36-15S	
P6					8526289	
P7					MS3106A28-16S	
P8 thru P10					MS35170	
P12					MS35170	
P13					7602334	
P14					MS3108A36-15S	
P15					MS3106A28-15S	
P16					MS35170	
P17					MS36170	

(U) Battery Control Console 8173147 (With Antijam Display Capability)—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
P18					MS35170	
P19					MS3108B28-11S	
P20 thru P22					MS35170	
P23					7602334	
P24					MS3108B28-15SW	
P25					MS3108B28-15S	
P26					MS3106A20-27S	
P27, P28					7602334	
P29					MS3108B24-28S	
P30					MS3106A28-15S	
P31 thru P33					7605564	
P34 thru P42					MS35170	
P43					7601757	
P44 thru P50					MS35170	
P51					7601757	
P52					MS35170	
P53					7602334	
P54					9009436	
P55					7602334	
P56					7602334	
P57					MS3106A24-2P	
P58					7620334	
P59					9009436	
P60, P61					7602334	
P62					MS3108B28-15SX	
P63					MS3108B28-11SW	
P64					MS3108B16S-8S	
R1	0.249 meg	±1		1	7599636	
R2	0.316 meg	±1		1	7599747	
R3	0.249 meg	±1		1	7599636	
R4	0.316 meg	±1		1	7599747	
R5	0.249 meg	±1		1	7599636	
R6	0.316 meg	±1		1	7599747	
R7	0.249 meg	±1		1	7599636	
R8	0.316 meg	±1		1	7599747	
R21	0.249 meg	±1		1	7599636	
R22	0.316 meg	±1		1	7599747	
R23	0.249 meg	±1		1	7599636	
R24	0.316 meg	±1		1	7599747	
R25	0.249 meg	±1		1	7599636	
R26	0.316 meg	±1		1	7599747	
R31	50 ohm	±10		2	9004097	
R32	7.1 ohm	±5		11	9009488	
R33, R34	100 ohm	±5		1/2	MS35043-63	
S11					9001495	
S12 thru S14					7602615	
S21 thru S25					7602749	
S26					9000695	
T1					8015382	
TB1					9004457	
TB2, TB3					7599704 or 7634159	



ORD G269601

Figure 3.2 (U). Battery control console 8178147 (with auxiliary acquisition radar modification and antijam display capability)—schematic diagram (sheet 1 of 9) (U).



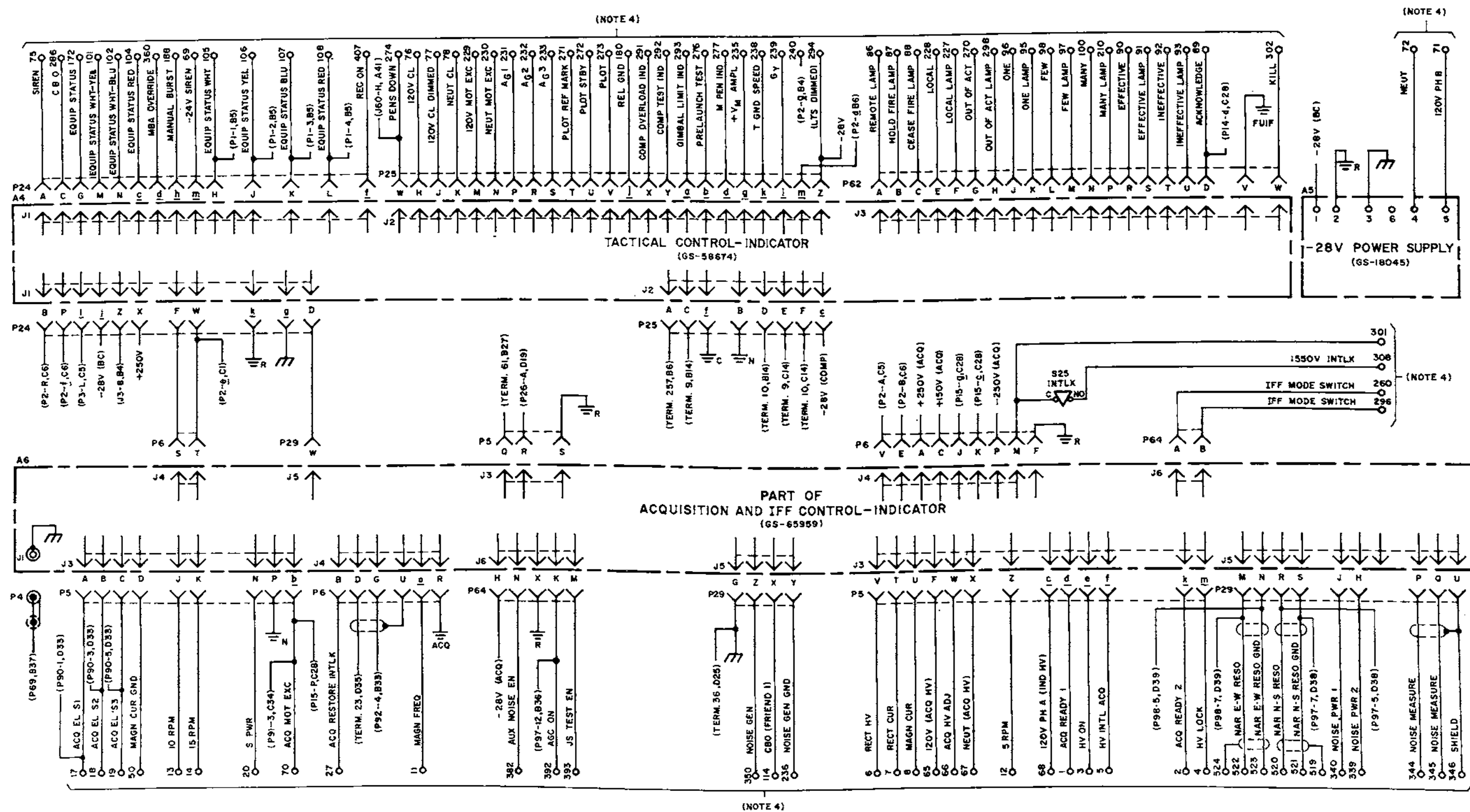


Figure 3.3 (U). Continued (sheet 2 of 9).

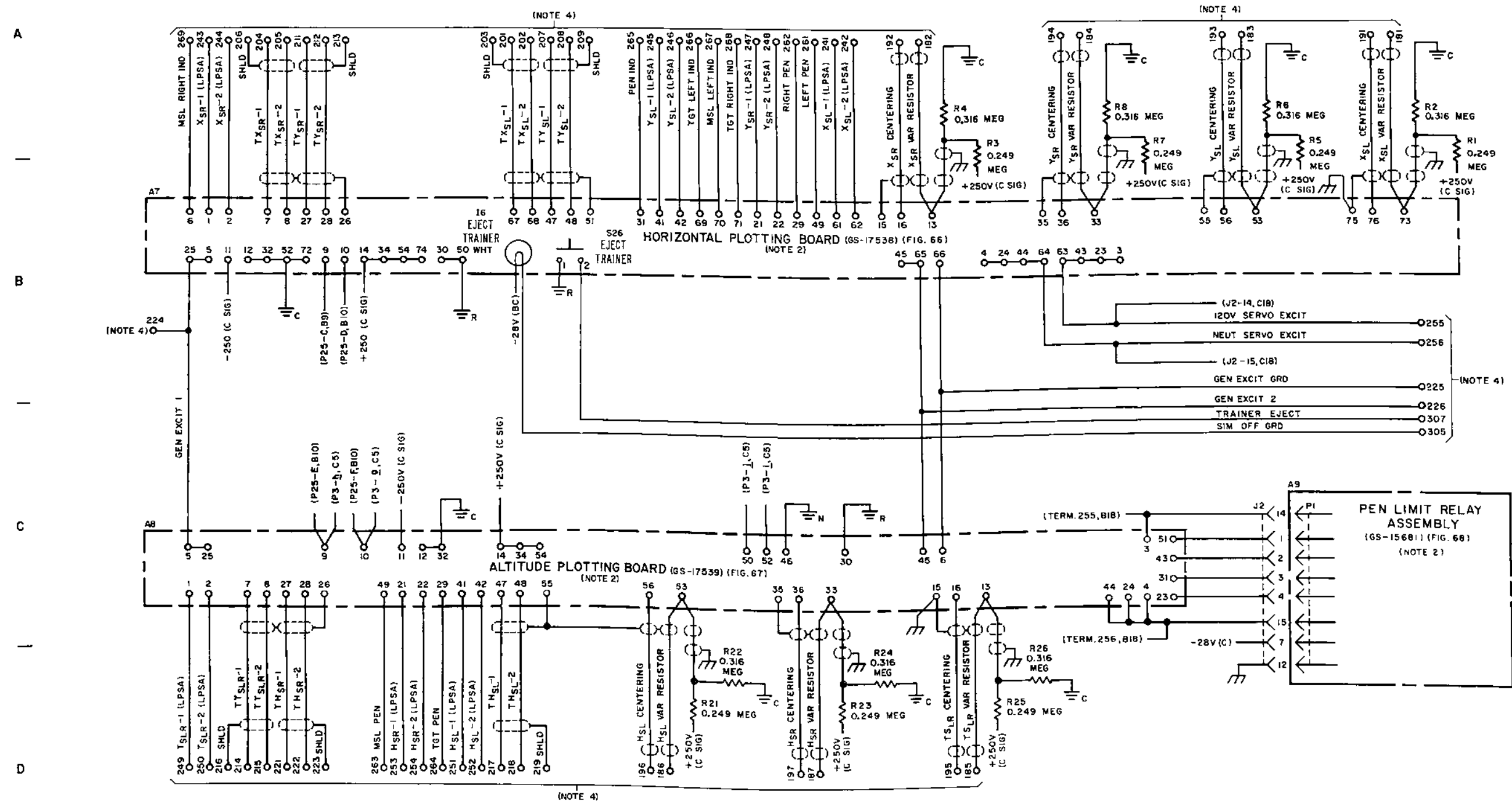


Figure 3.3 (U). Continued (sheet 3 of 9).

ORD G269602

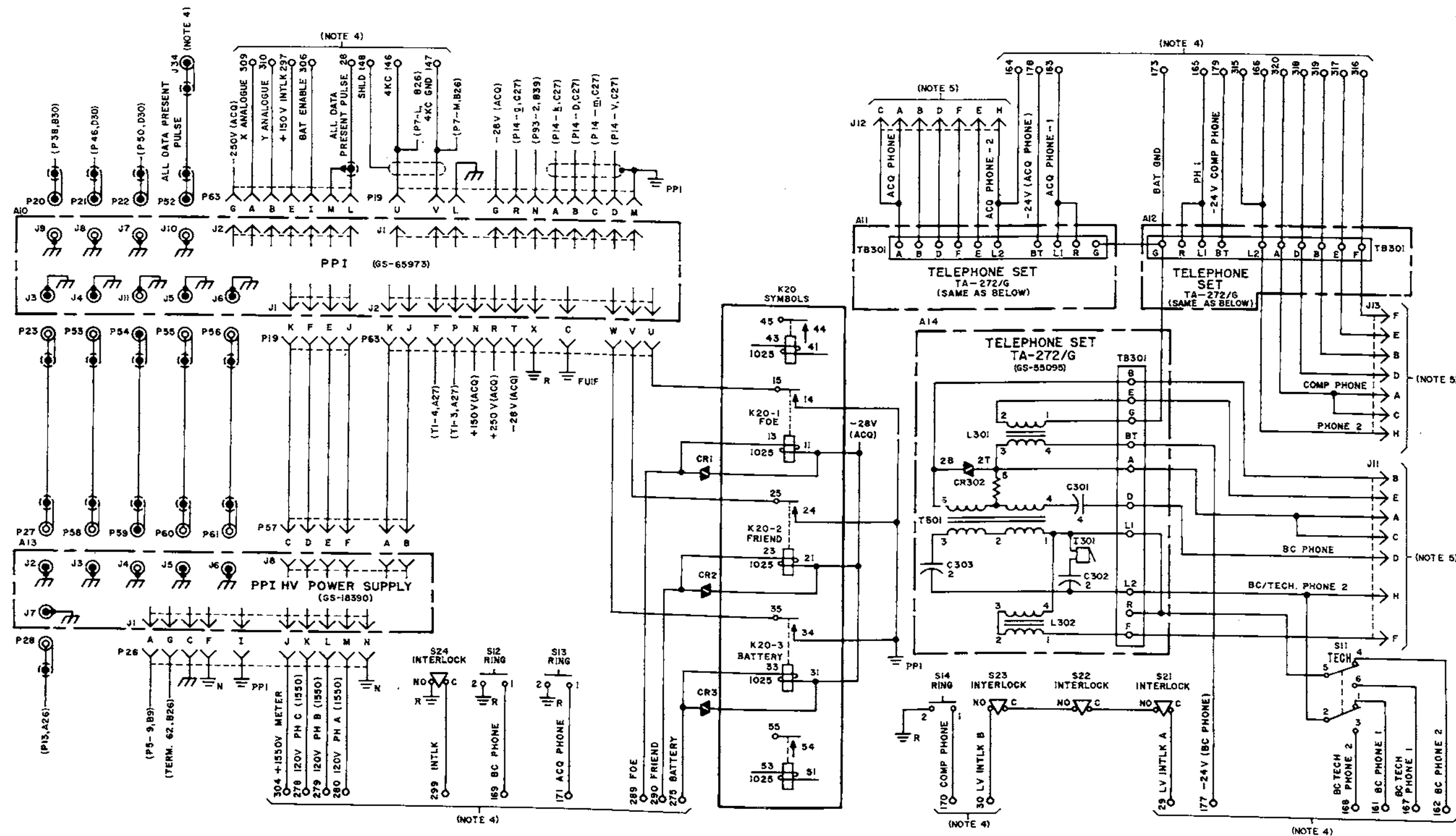


Figure 3.3 (U). Continued (sheet 4 of 9).

**CONFIDENTIAL**

ORD G82906

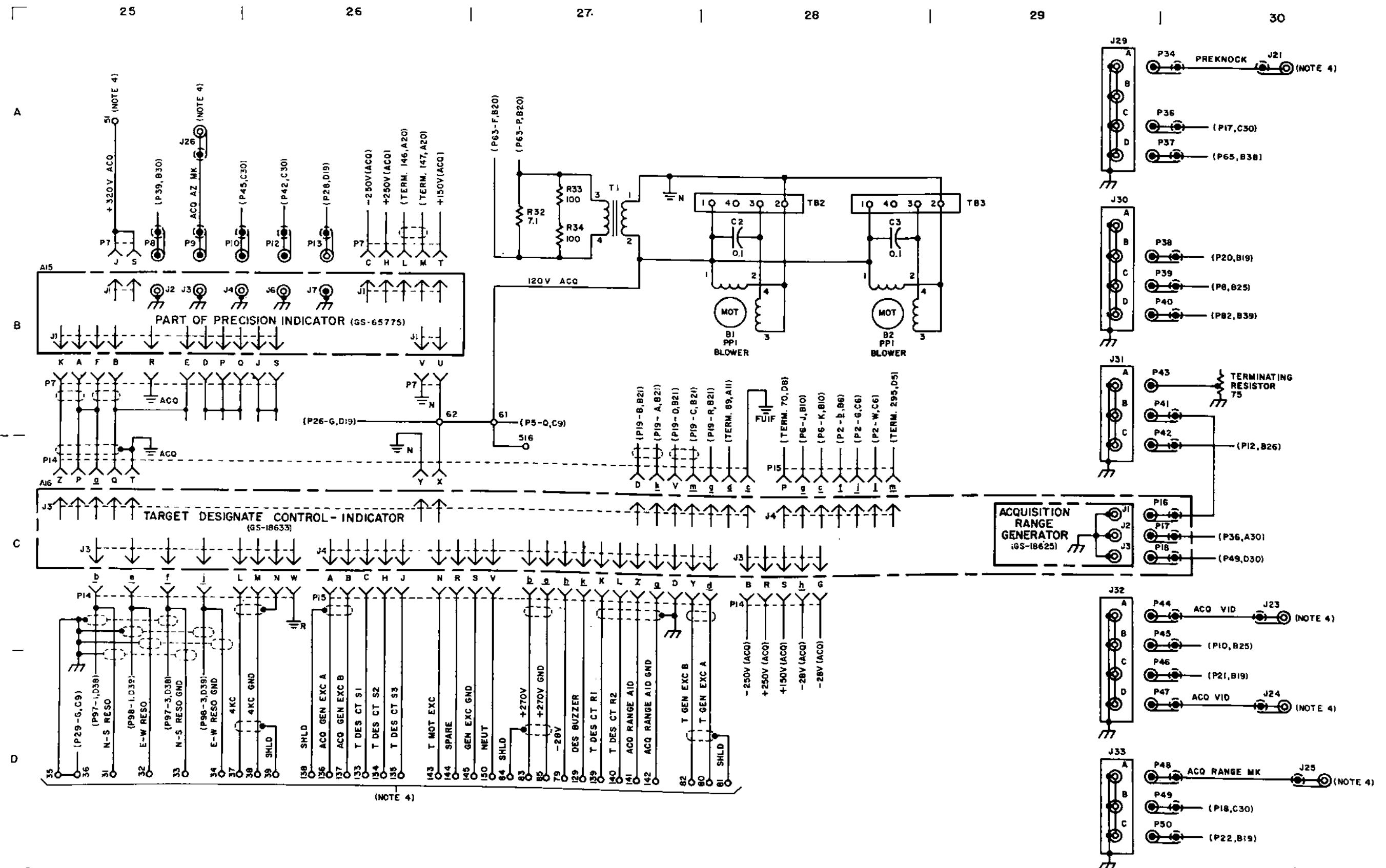
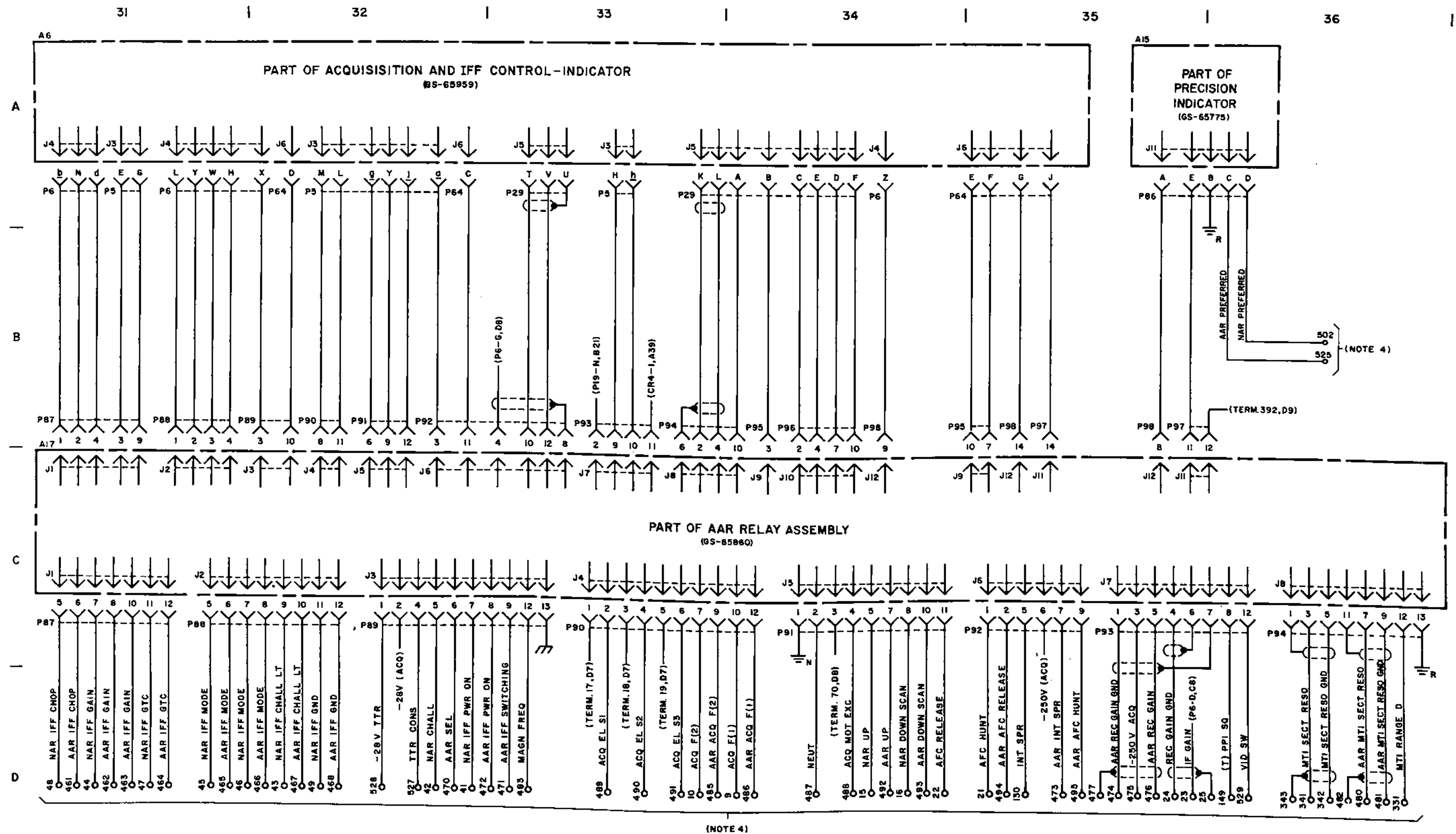


Figure 3.3 (U). Continued (sheet 5 of 9).

**CONFIDENTIAL**

ORD G252157



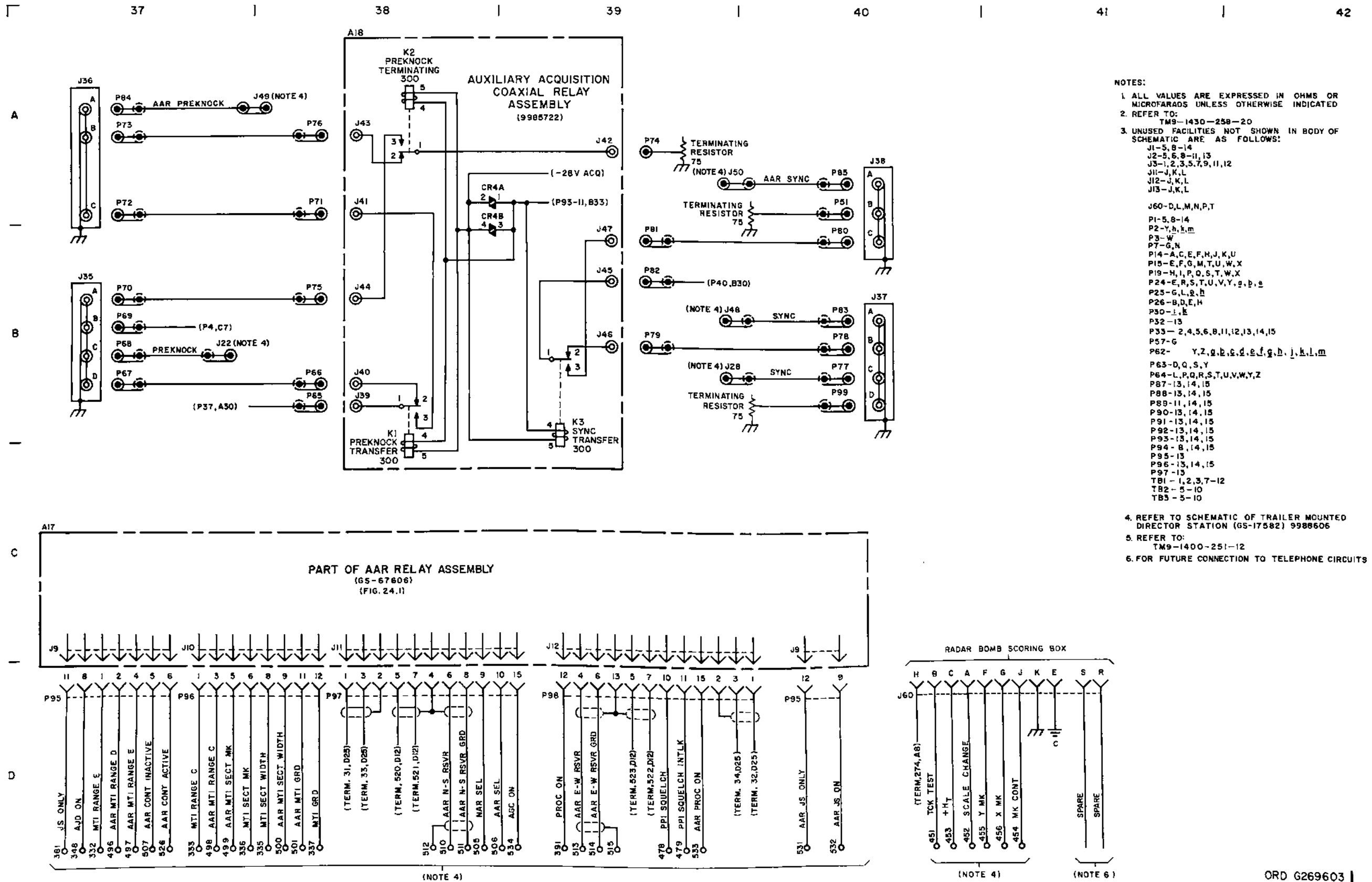


Figure 3.3 (U). Continued (sheet 7 of 9).

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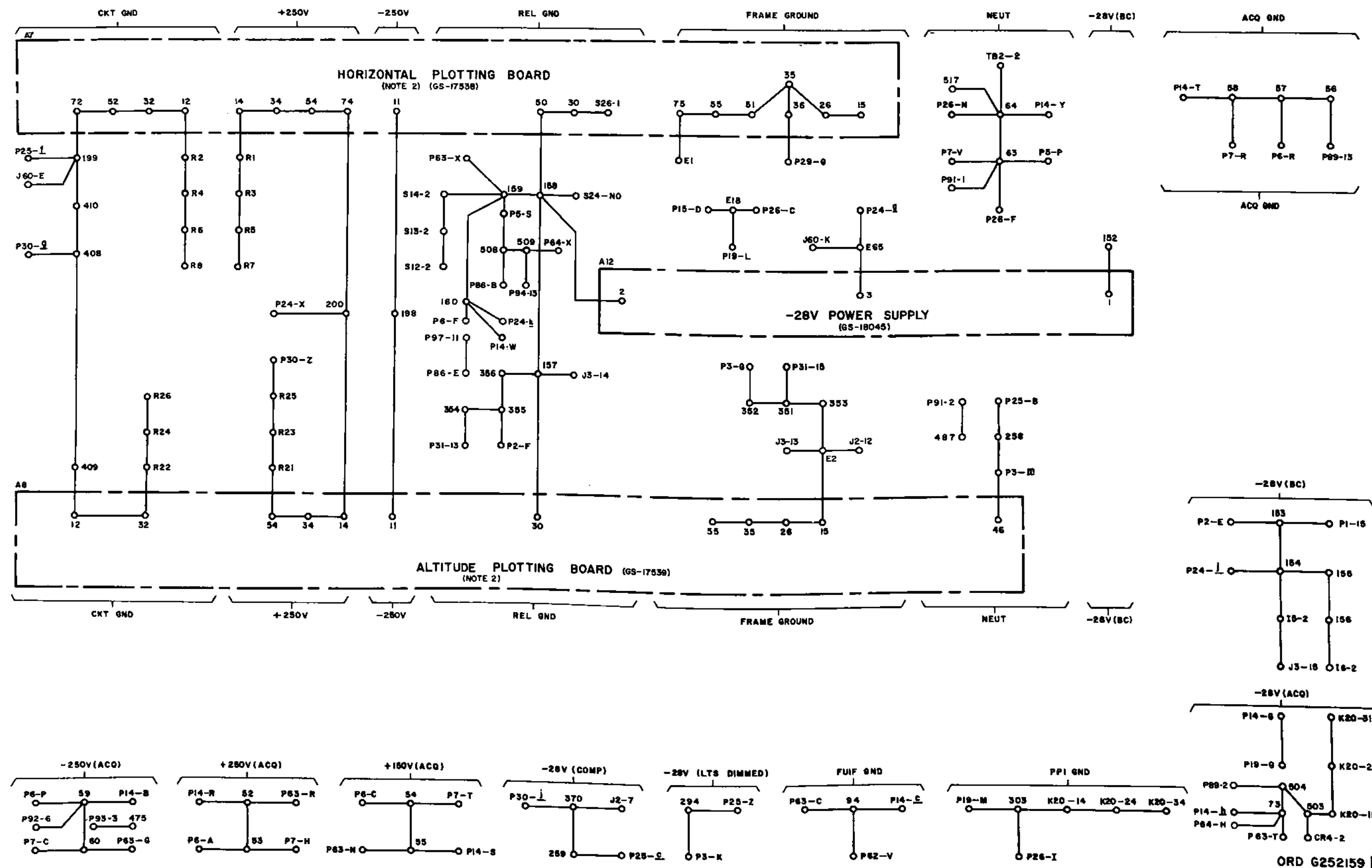


Figure 3.3 (U). Continued (sheet 8 of 9).



## INDEX OF TERMINALS

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	D11	55	A2	109	A4	163	A23	217	D14	271	A9	325	No Conn	379	D4	473	D35	527	D32
2	D11	56	D1	110	A3	164	A23	218	D14	272	A9	326	↑	380	D3	474	D35	528	D32
3	D11	57	D1	111	D5	165	A23	219	D15	273	A9	327	↑	381	D37	475	D35	529	D36
4	D11	58	D1	112	D5	166	A23	220	D3	274	A9	328	↓	382	D9	476	D35	530	No Conn
5	D11	59	D1	113	D5	167	D24	221	D14	275	D21	329	↓	383	D6	477	D35	531	D40
6	D10	60	D1	114	D10	168	D24	222	D14	276	A9	330	No Conn	384	D6	478	D39	532	D40
7	D10	61	B27	115	D3	169	D20	223	D14	277	A9	331	D36	385	D6	479	D39	533	D39
8	D10	62	B26	116	D3	170	D22	224	B13	278	D20	332	D37	386	D6	480	D36	534	D38
9	D34	63	B1	117	D3	171	D21	225	C18	279	D20	333	D37	387	A1	481	D36	535	No Conn
10	D33	64	B1	118	D3	172	A7	226	C18	280	D20	334	No Conn	388	A1	482	D36	536	↑
11	D8	65	D10	119	D3	173	A23	227	A10	281	D6	335	D37	389	A1	483	D33	537	↑
12	D11	66	D10	120	D3	174	No Conn	228	A10	282	D6	336	D37	390	A1	484	No Conn	538	↑
13	D7	67	D10	121	D3	175	No Conn	229	A8	283	D6	337	D38	391	D39	485	D33	539	↓
14	D7	68	D11	122	D4	176	No Conn	230	A9	284	D5	338	No Conn	392	D9	486	D34	540	No Conn
15	D34	69	A7	123	D4	177	D23	231	A9	285	D5	339	D12	393	D9	487	D34		
16	D34	70	D8	124	D4	178	A23	232	A9	286	A7	340	D12	394	D1	488	D34		
17	D7	71	A12	125	D5	179	A23	233	A9	287	No Conn	341	D36	395	D1	489	D33		
18	D7	72	A12	126	D3	180	A8	234	D2	288	D5	342	D36	396	D1	490	D33		
19	D7	73	A3	127	D3	181	A18	235	A10	289	D21	343	D36	397	D2	491	D33		
20	D8	74	D5	128	D3	182	A16	236	D10	290	D21	344	D12	398	D2	492	D34		
21	D35	75	A7	129	D27	183	A17	237	No Conn	291	A9	345	D12	399	D2	493	D34		
22	D34	76	A8	130	D35	184	A17	238	A10	292	A9	346	D12	400	D2	494	D35		
23	D35	77	A8	131	D5	185	D16	239	A10	293	A9	347	No Conn	401	D2	495	D35		
24	D35	78	A8	132	No Conn	186	D16	240	A10	294	A10	348	D37	402	D2	496	D37		
25	D36	79	D27	133	D26	187	D15	241	A16	295	D5	349	No Conn	403	D2	497	D37		
26	No Conn	80	D28	134	D26	188	A7	242	A16	296	C12	350	D9	404	D2	498	D37		
27	D8	81	D28	135	D26	189	No Conn	243	A13	297	A20	351	C1	405	D2	499	D37		
28	A20	82	D27	136	D26	190	D5	244	A13	298	A11	352	C1	406	No Conn	500	D38		
29	D23	83	D27	137	D26	191	A18	245	A15	299	D20	353	C1	407	A8	501	D38		
30	D22	84	D27	138	D26	192	A16	246	A15	300	No Conn	354	A1	408	B1	502	B36		
31	D25	85	D27	139	D27	193	A17	247	A15	301	B12	355	A1	409	B1	503	A3		
32	D25	86	A10	140	D27	194	A17	248	A16	302	A12	356	A1	410	B1	504	A3		
33	D25	87	A10	141	D27	195	D16	249	D13	303	C1	357	A3	451	D40	505	D39		
34	D25	88	A10	142	D27	196	D16	250	D13	304	D20	358	A3	452	D41	506	D39		
35	D25	89	A11	143	D26	197	D15	251	D14	305	C18	359	A3	453	D40	507	D37		
36	No Conn	90	A11	144	D27	198	A3	252	D14	306	A20	360	A7	454	D40	508	A1		
37	D26	91	A11	145	D27	199	B1	253	D14	307	C18	361	D2	455	D40	509	A1		
38	D26	92	A11	146	A20	200	A3	254	D14	308	B12	362	No Conn	456	D40	510	D38		
39	D26	93	A11	147	A20	201	A14	255	B18	309	A19	363	D2	457	No Conn	511	D38		
40	A2	94	B1	148	A20	202	A15	256	B18	310	A20	364	A4	458	↑	512	D38		
41	D32	95	A11	149	D36	203	A14	257	B6	311	A3	365	A2	459	↑	513	D39		
42	D32	96	A11	150	D27	204	A13	258	B1	312	No Conn	366	A4	460	No Conn	514	D39		
43	D32	97	A11	151	No Conn	205	A14	259	A2	313	No Conn	367	A2	461	D31	515	D39		
44	D31	98	A11	152	A3	206	A13	260	C12	314	No Conn	368	A2	462	D31	516	C27		
45	D31	99	A5	153	A4	207	A15	261	A16	315	A23	369	A2	463	D31	517	B1		
46	D31	100	A11	154	A4	208	A15	262	A16	316	A24	370	A2	464	D31	518	No Conn		
47	D31	101	A7	155	A4	209	A15	263	D15	317	A24	371	D4	465	D31	519	D12		
48	D31	102	A7	156	A4	210	A11	264	D14	318	A24	372	D4	466	D32	520	D12		
49	D32	103	D5	157	A1	211	A14	265	A15	319	A24	373	D4	467	D32	521	D12		
50	D7	104	A7	158	A1	212	A14	266	A15	320	A24	374	D4	468	D32	522	D12		
51	A25	105	A7	159	A1	213	A14	267	A15	321	No Conn	375	D4	469	No Conn	523	D12		
52	D1	106	A7	160	A1	214	D13	268	A15	322	↑	376	D4	470	D32	524	D11		
53	D1	107	A8	161	D24	215	D13	269	A13	323	↑	377	D4	471	D33	525	B36		
54	A2	108	A8	162	D24	216	D13	270	A10	324	No Conn	378	D4	472	D33	526	D37		

Figure 3.3 (U). Continued (sheet 9 of 9).

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(U) Battery Control Console 8173147 (With Auxiliary Acquisition Radar Modification and Antijam Display Capability)—Apparatus List

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
A1					9154880	GS-18143
A2					8012372	GS-15712
A3					10184906	GS-67717
A4					9986427	GS-58674
A5					9986524	GS-18045
A6					9988650	GS-65959
A7					8171900	GS-17538
A8					8171886	GS-17539
A9					8009615	GS-15681
A10					9988576	GS-65973
A11, A12					8010134	GS-55095
A13					9142872	GS-18390
A14					8010134	GS-55095
C301	4 $\mu$ f	±10		600	7593727	CP70B1EF405H
C302, C303	2 $\mu$ f	±10		600	7593728	CP70B1EF205H
CR302					8024363	
I301	650 ohm	±5			7653456	
L301, L302					8007179	
T301					8175113	
A15					9985665	GS-65775
A16					9986487	
A17					9991396	GS-67606
A18					9985722	
CR4					8515017	
J35 thru					9003874	
J38						
K1 thru K3					9001042	
P74					7601757	
B1, B2					7599786	
C1	0.1 $\mu$ f	±10		200	7599189	
C2, C3	0.1 $\mu$ f	±10		600	7631683	
CR1 thru					WECO	G221549
CR3						
I1 thru I4			75	125	8175448	
I5					7599913	
I6					572994	
J1					7598934	
J2, J3					7599367	
J11 thru J13					8175623	
J21 thru J28					7599662	
J29, J30					9003874	
J31					8519232	
J32					9003874	
J33					8519232	
J34					MS35181	
J48 thru J50					7599662	
J60					MS3102A20	
K20					9004095	
LS1					8011143	
P1					7605564	
P2					MS3106A28-21S	
P3					MS3106A28-15SW	
P4					7602336	
P5					MS3108B36-15S	
P6					8526289	
P7					MS3106A28-16S	
P8 thru P10					MS35170	
P12					MS35170	
P13					7602334	

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
P14					MS3106A36-15S	
P15					MS3106A28-15S	
P16 thru P18					MS35170	
P19					MS3108B28-11S	
P20 thru P22					MS35170	
P23					7602334	
P24					MS3108B28-15SW	
P25					MS3108B28-15S	
P26					MS3108A20-27S	
P27, P28					7602334	
P29					MS3108B24-28S	
P30					MS3106A28-15S	
P31 thru P33					7605564	
P34					MS35170	
P36					MS35170	
P37 thru P42					MS35170	
P43					7601757	
P44 thru					MS35170	
P50						
P51					7601757	
P52					MS35170	
P53					7602334	
P54					9009436	
P55, P56					7602334	
P57					MS3106A24-2P	
P58					7602334	
P59					9009436	
P60, P61					7602334	
P62					MS3108B28-15SX	
P63					MS3108B28-11SW	
P64					MS3108B16S-8S	
P65 thru					MS35170	
P85						
P86					9007241	
P87 thru P98					7605564	
P99					MS35170	
R1	0.249 meg	±1	1		7599636	
R2	0.316 meg	±1	1		7599747	
R3	0.249 meg	±1	1		7599636	
R4	0.316 meg	±1	1		7599747	
R5	0.249 meg	±1	1		7599636	
R6	0.316 meg	±1	1		7599747	
R7	0.249 meg	±1	1		7599636	
R8	0.316 meg	±1	1		7599747	
R21	0.249 meg	±1	1		7599636	
R22	0.316 meg	±1	1		7599747	
R23	0.249 meg	±1	1		7599636	
R24	0.316 meg	±1	1		7599747	
R25	0.249 meg	±1	1		7599636	
R26	0.316 meg	±1	1		7599747	
R31	50	±10	2		9004097	
R32	7.1	±5	11		9009488	
R33, R34	100	±5	1/2		MS35043-63	
S11					9001495	
S12 thru S14					7602615	
S21 thru S25					7602749	
S26					9000695	
T1					8015382	
TB1					9004457	
TB2, TB3					7599704 or 7634159	

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(U) Battery Control Console 8178147 (With Auxiliary Acquisition Radar Modification and Antijam Display Capability)—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
P50					MS35170	
P51					7601757	
P52					MS35170	
P53					7602334	
P54					9009436	
P55					7602334	
P56					7602334	
P57					MS3106A24-2P	
P58					7602334	
P59					9009436	
P60					7602334	
P61					7602334	
P62					MS3108B28-15SX	
P63					MS3108B28-11SW	
P64					MS3108B16S-8S	
P65					MS35170	
P66					MS35170	
P67					MS35170	
P68					MS35170	
P69					MS35170	
P70					MS35170	
P71					MS35170	
P72					MS35170	
P73					MS35170	
P74					MS35170	
P75					MS35170	
P76					MS35170	
P77					MS35170	
P78					MS35170	
P79					MS35170	
P80					MS35170	
P81					MS35170	
P82					MS35170	
P83					MS35170	
P84					MS35170	
P85					MS35170	
P86					9007241	
P87					7605564	
P88					7605564	
P89					7605564	
P90					7605564	
P91					7605564	
P92					7605564	
P93					7605564	
P94					7605564	
P95					7605564	
P96					7605564	
P97					7605564	
P98					7605564	
R1	0.249 meg	±1	1		7599636	
R2	0.316 meg	±1	1		7599747	
R3	0.249 meg	±1	1		7599636	
R4	0.316 meg	±1	1		7599747	
R5	0.249 meg	±1	1		7599636	
R6	0.316 meg	±1	1		7599747	
R7	0.249 meg	±1	1		7599636	
R8	0.316 meg	±1	1		7599747	
R21	0.249 meg	±1	1		7599636	
R22	0.316 meg	±1	1		7599747	

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
R23	0.249 meg	±1	1		7599636	
R24	0.316 meg	±1	1		7599747	
R25	0.249 meg	±1	1		7599636	
R26	0.316 meg	±1	1		7599747	
R31	50 ohm	±10	2		9004097	
R32	7.1 ohm	±5	11		9009488	
R33	100 ohm	±5	1/2		MS35043-63	
R34	100 ohm	±5	1/2		MS35043-63	
S11					9001495	
S12					7602615	
S13					7602615	
S14					7602615	
S21					7602749	
S22					7602749	
S23					7602749	
S24					7602749	
S25					7602749	
T1					8015382	
TB1					9004457	
TB2					7599704 or 7634159	
TB3					7599704 or 7634159	

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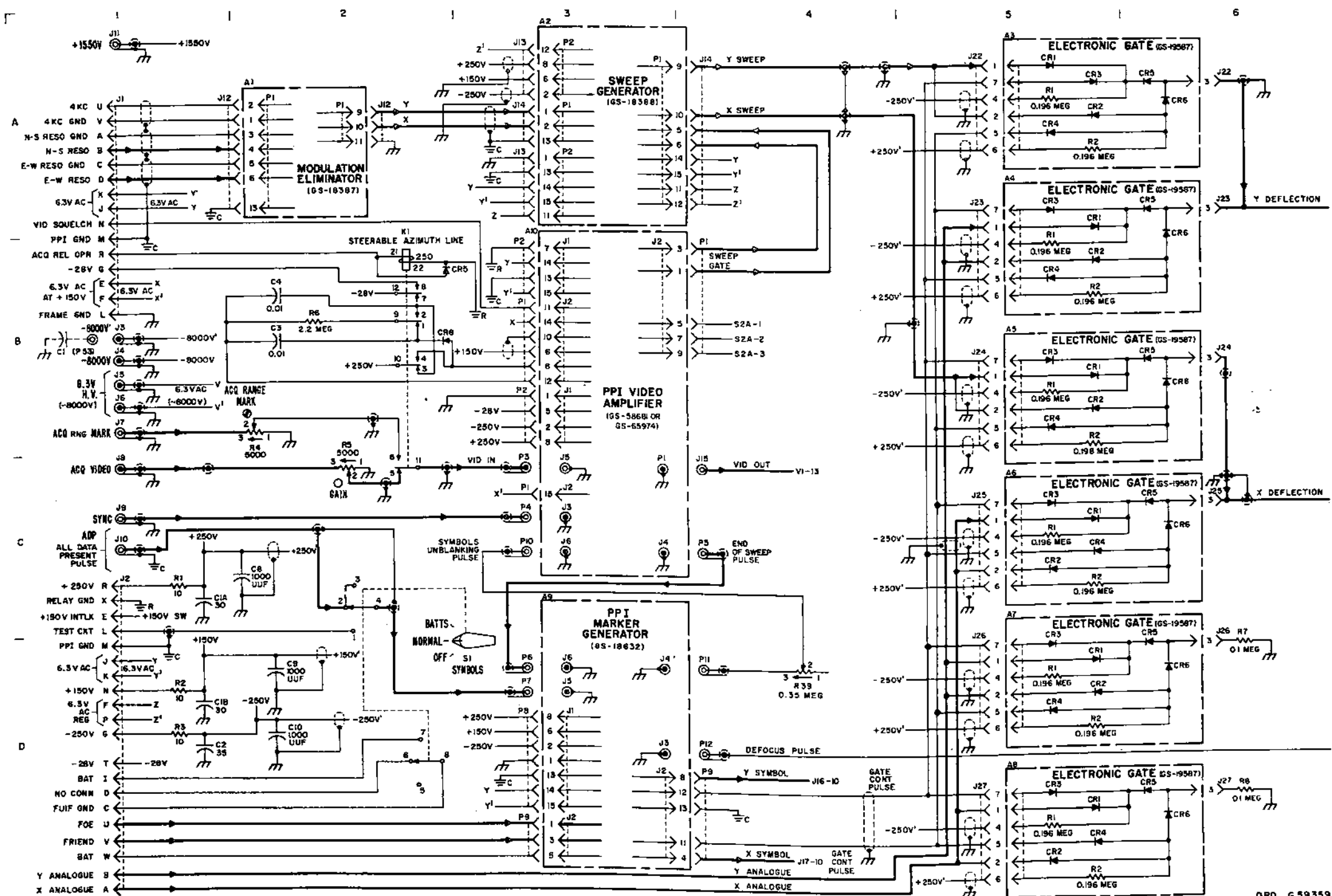


Figure 4 (CMHA). PPI 9142868 or 9988576—schematic diagram (sheet 1 of 2).

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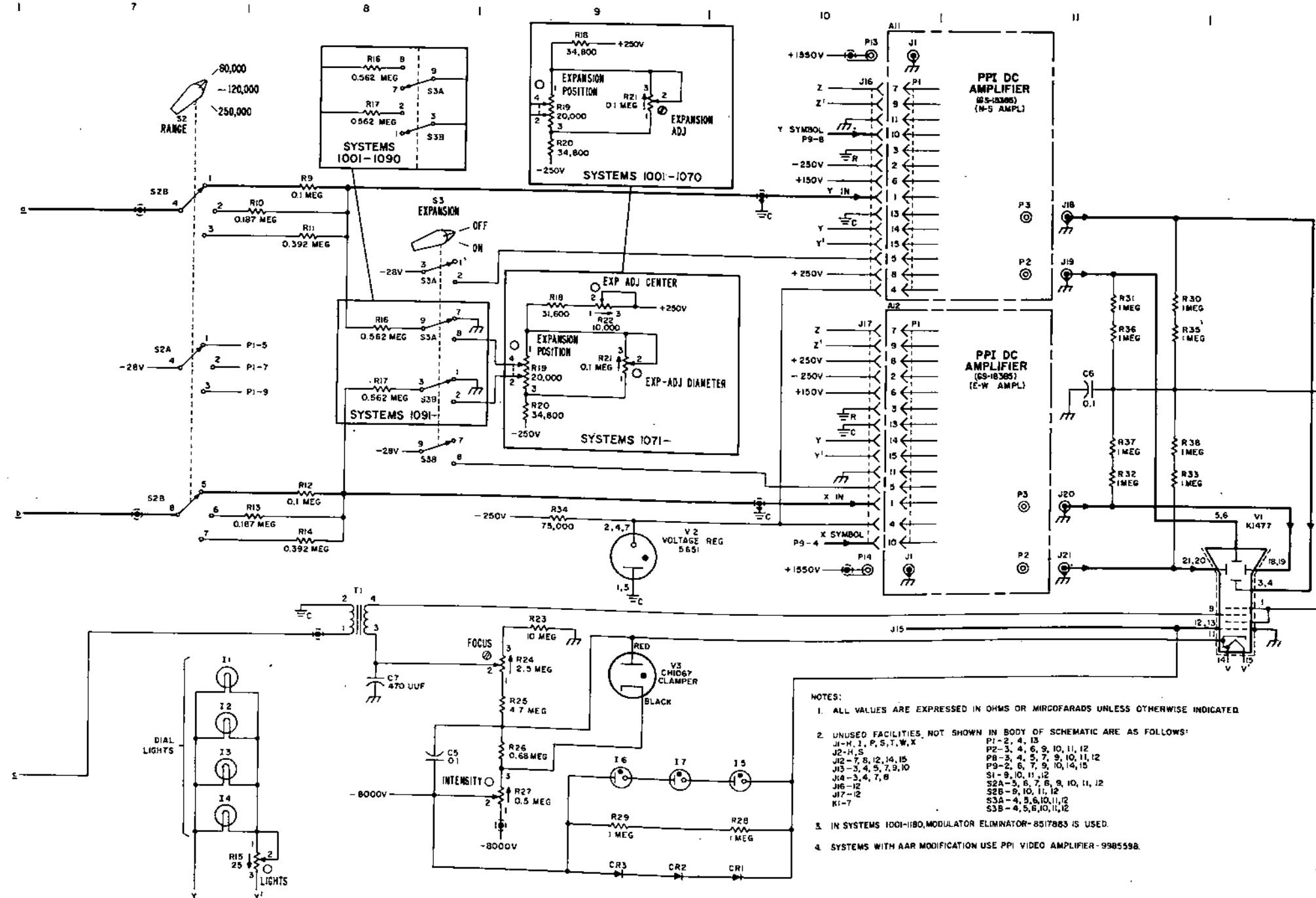


Figure 4 (CMHA). Continued (sheet 2 of 2).

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(U) PPI 9142868 or 9988576—Apparatus List

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
A1					9007951	GS-18387
A2					8518032	GS-18388
A3					9007695	GS-19587
A4					9007695	GS-19587
A5					9007695	GS-19587
A6					9007695	GS-19587
A7					9007695	GS-19587
A8					9007695	GS-19587
A9					9007680	GS-18632
A10					9142869	GS-58681
A10					9985598	GS-65794
A11					9005503	GS-18385
A12					9005503	GS-18385
C1	30-30	+50 -10		400	CE42C300Q	
C2	35	+50 -10		400	CE41C350Q	
C3	0.01	10		300	CN35EX103M	
C4	0.01	10		300	CN35EX103M	
C5	0.1	10		600	9144160	
C6	0.1	10		1000	9007536	
C7	470 μf	10		10,000	9007460	
C8	1000 μf	+100 -20		500	MS90129-1	
C9	1000 μf	+100 -20		500	MS90129-1	
C10	1000 μf	+100 -20		500	MS90129-1	
CR5					8024680	
CR6					8519051	
I1					504521	
I2					504521	
I3					504521	
I4					504521	
I5					8108422	
I6					8108422	
I7					8108422	
J1					9003775	
J2					9003411	
J3					8175024	
J4					7601927	
J5					8175024	
J6					8175024	
J7					8531071	
J8					7599662	
J9					8531071	
CR1					8516150	
CR2					8516150	
CR3					8516150	
J10					8531071	
J11					9004160	
J12					7599367	
J13					7599367	
J14					7599367	
J15					9137285	
J16					7599367	
J17					7599367	

(U) PPI 9142868 or 9988576—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
J18					9143247	
J19					9143247	
J20					9143247	
J21					9143247	
J22-J27					9007660	
K1					9003099	
P1					7599546	
P2					7599546	
P3					MS35170	
P4					9003043	
P5					9003043	
P6					9003043	
P7					9003043	
P8					7605564	
P9					7605564	
P10					9003043	
P11					9003043	
P12					9003043	
P13					9003043	
P14					9003043	
R1	10	5	1		MS35044-53	
R2	10	5	1		MS35044-53	
R3	10	5	1		MS35044-53	
R4	5000	10	2		8175087	
R5	5000	10	2		9003012	
R6	2.2 meg	10	½		MS35043-33	
R7	0.1 meg	5	½		MS35043-135	
R8	0.1 meg	5	½		MS35043-135	
R9	0.1 meg	1	½		9002937	
R10	0.187 meg	1	½		9003070	
R11	0.392 meg	1	½		9009616	
R12	0.1 meg	1	½		9002937	
R13	0.187 meg	1	½		9003070	
R14	0.392 meg	1	½		9009616	
R15	25	10	25		9002902	
R16	0.562 meg	1	½		9002970	
R17	0.562 meg	1	½		9002970	
R18	34,800	1	2		8518555	
R18	31,600	1	2		9012052	
R19	20,000	10	2		8518653	
R19	20,000	5	2		8159252	
R20	34,800	1	2		8518555	
R21	0.1 meg	10	2		8175572	
R22	10,000	10	2		8175650	
R23	10 meg	5	10		9003746	
R24	2.5 meg	10	2		8518818	
R25	4.7 meg	5	1		9003745	
R26	0.68 meg	5	1		MS35044-169	
R27	0.5 meg	10	2		9002949	
R28	1 meg	5	½		MS35043-159	
R29	1 meg	5	½		MS35043-159	
R30	1 meg	1	½		MS35043-31	
R31	1 meg	1	½		MS35043-31	
R32	1 meg	1	½		MS35043-31	
R33	1 meg	1	½		MS35043-31	
R34	75,000	1	½		9003077	
R35	1 meg	1	½		MS35043-31	

(U) PPI 9142868 or 9988576—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
R36	1 meg	1	½		MS35043-31	
R37	1 meg	1	½		MS35043-31	
R38	1 meg	1	½		MS35043-31	
R39	0.35 meg	10	2		9144131	
S1					8518480	
S2					8518478	
S3					8518479	
T1					9003099	
V1					K1477	
V2					5651	
V3					CH1067	

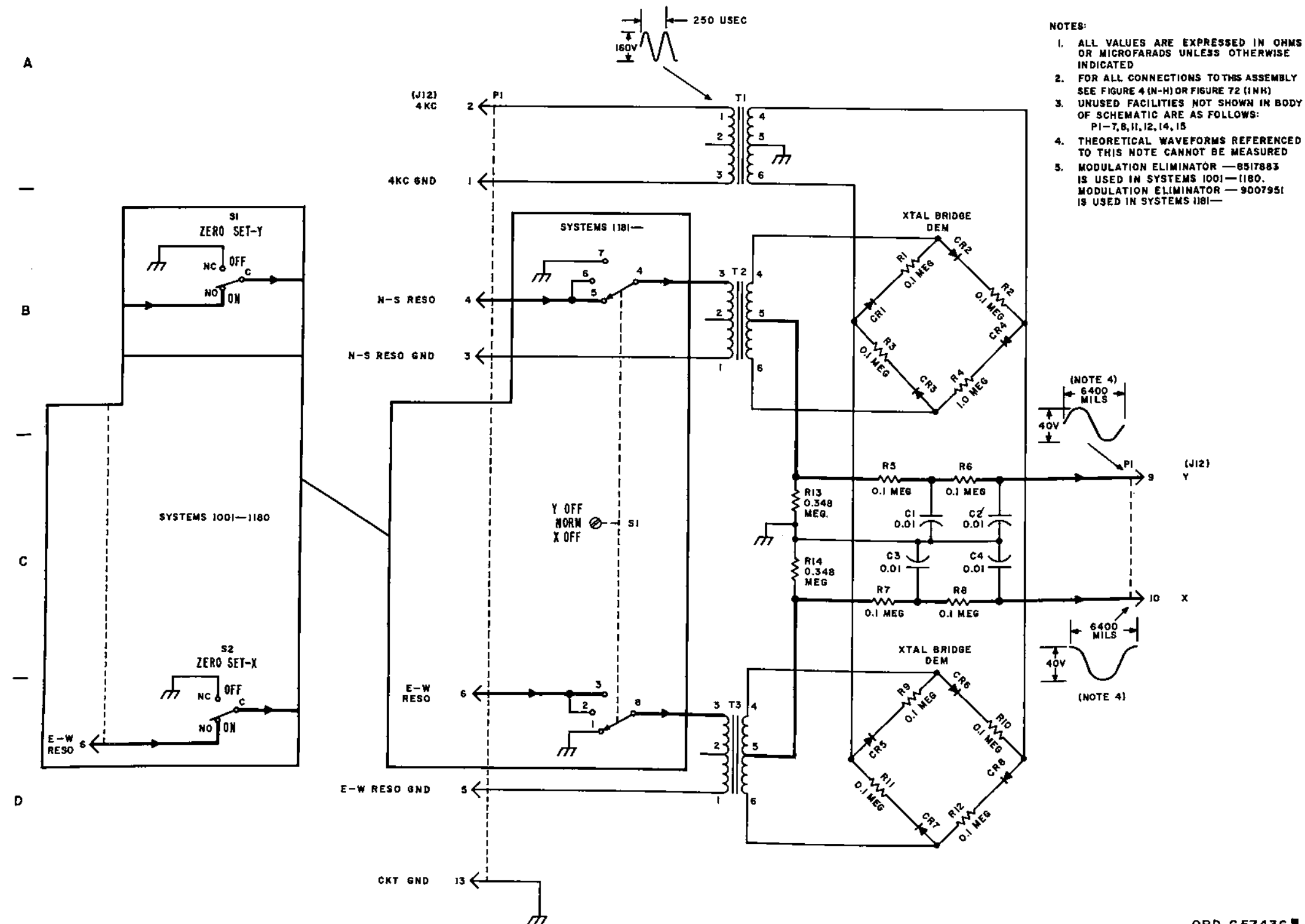
<sup>1</sup> Systems 1001-1070.

<sup>2</sup> Systems 1071-1362.

<sup>3</sup> Systems 1001-1218.

<sup>4</sup> Systems 1219-1362.





- NOTES:**
1. ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
  2. FOR ALL CONNECTIONS TO THIS ASSEMBLY SEE FIGURE 4 (N-H) OR FIGURE 72 (I-NH)
  3. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
P1-7, 8, 11, 12, 14, 15
  4. THEORETICAL WAVEFORMS REFERENCED TO THIS NOTE CANNOT BE MEASURED
  5. MODULATION ELIMINATOR — 8517883 IS USED IN SYSTEMS 1001 — 1180.  
MODULATION ELIMINATOR — 9007951 IS USED IN SYSTEMS 1181 —

**Modulation Eliminator 8517883 or 9007951—  
Apparatus List**

Reference designation	Ordinance part no.	Part description
C1, C2....	522119	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f $\pm 10\%$ , type CM35B103K
CR1, CR2, CR3, CR4, CR5, CR6, CR7, CR8.	8519051	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon
P1.....	7598934	CONNECTOR, RECEPTA- CLE, ELECTRICAL: rect, 15 male cont
R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12.	9002937	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.1 meg $\pm 1\%$
R13, R14..	9003018	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.348 meg $\pm 1\%$
S1 <sup>1</sup> , S2...	9000783	SWITCH, TOGGLE: spdt; 250v ac, 5 amp, 30v dc, 2 amp; type 6AT1
S12.....	9136008	SWITCH, ROTARY: 2 pole 3 position, 1 sec
T1, T2, T3	7605338	TRANSFORMER, AUDIO FREQUENCY: input; 827 ohm input, 3,050 ohm output

<sup>1</sup>Systems 1001-1180

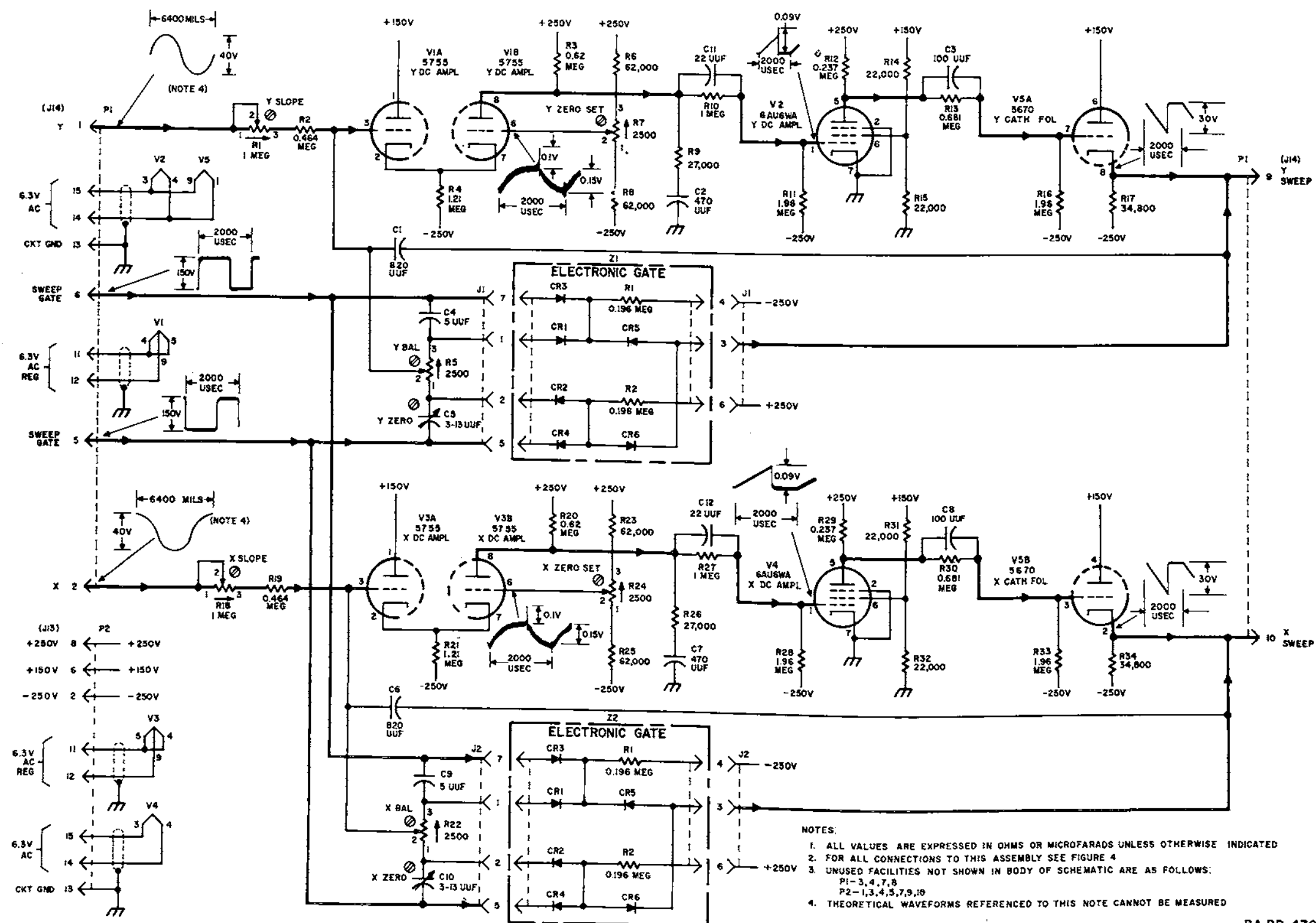
<sup>2</sup>Systems 1181-

ORD 657436

**Figure 5 (U). Modulation eliminator 8517883 or 9007951—schematic diagram.**

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RA PD 4702571

Figure 6 (U). Sweep generator 8518032—schematic diagram.

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Sweep Generator 8518032—Apparatus List

Reference designation	Ordinance part No.	Part description
C1, C6	9002983	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 820 $\mu$ f $\pm 5\%$ , type CM20B821J.
C2, C7	8515604	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 470 $\mu$ f $\pm 5\%$ , type CM15B471J.
C3, C8	8515520	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 100 $\mu$ f $\pm 5\%$ , type CM15B101J.
C4, C9	MS35036-1	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 5 $\mu$ f $\pm 20\%$ , type CM15B050M.
C5, C10	8175962	CAPACITOR, VARIABLE, CERAMIC DIELECTRIC: 500v dc, 3 $\mu$ f min to 13 $\mu$ f max, type CV11B130.
C11, C12	8515606	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 22 $\mu$ f $\pm 20\%$ , type CM15B220J.
J1, J2	9007660	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 7 female cont.
P1, P2	7598934	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.
R1, R18	9000662	RESISTOR, VARIABLE: composition; $\frac{1}{4}$ w, 1 meg $\pm 20\%$
R2, R19	9003068	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 0.484 meg $\pm 1\%$
R3, R20	9003079	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 0.62 meg $\pm 1\%$
R4	9003073	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 1.21 meg $\pm 1\%$
R5, R7, R22, R24	9003013	RESISTOR, VARIABLE: wire wound; $1\frac{1}{4}$ w, 2,500 ohm $\pm 5\%$
R6, R8, R23, R25	8518552	RESISTOR, FIXED, FILM: 1w, 62,000 ohm $\pm 1\%$
R9, R26	MS35043-212	RESISTOR, FIXED, COMPOSITION: $\frac{1}{4}$ w, 27,000 ohm $\pm 10\%$ , type RC20GF273K.
R10, R27	9002938	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 1 meg $\pm 1\%$
R11, R16, R28, R33	9003069	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 1.96 meg $\pm 1\%$
R12, R29	9002987	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 0.237 meg $\pm 1\%$
R13, R30	9003078	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 0.681 meg $\pm 1\%$
R14, R15, R31, R32	MS35043-21	RESISTOR, FIXED, COMPOSITION: $\frac{1}{4}$ w, 22,000 ohm $\pm 10\%$ , type RC20GF223K.
R17, R34	8518555	RESISTOR, FIXED, FILM: 2w, 34,800 ohm $\pm 1\%$
R21	9003073	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 1.21 meg $\pm 1\%$
V1, V3	7599350	ELECTRON TUBE: type 5755
V2, V4	8519117	ELECTRON TUBE: type 6AU6WA
V5	8518396	ELECTRON TUBE: type 6E70
Z1, Z2		ELECTRONIC GATE 9007695
CR1, CR2, CR3, CR4, CR5, CR6	8516150	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon
R1, R2	9000954	RESISTOR, FIXED, FILM: $\frac{1}{4}$ w, 0.196 meg $\pm 1\%$

Figure 6. Sweep generator 8518032—schematic diagram—Continued

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MEASUREMENT NOTES

1. General

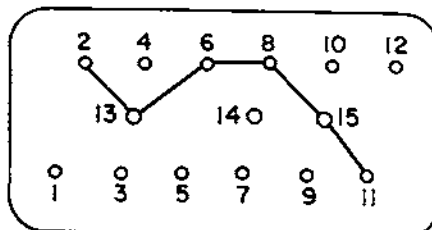
- a. Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- b. Notation 3 to 4 in the Pin column indicates that measurement is made between pins 3 and 4; notation 4, 5 to 9 indicates that measurement is made between pin 4 and pin 9 or pin 5 and pin 9.
- c. All values given are typical.

2. Voltage

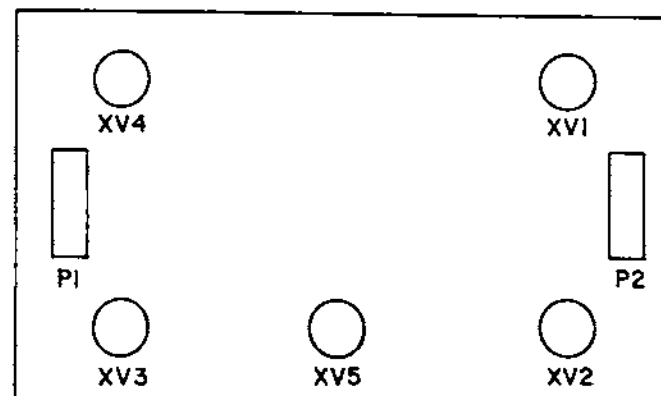
- a. Measurements are made with system energized through low voltage condition, and with ANTENNA-AZIMUTH RPM switch S7 set to OFF.
- b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- c. Voltages are +dc measured to ground, unless otherwise indicated.
- d. A dash in the Volts column indicates a voltage of no significance.

3. Resistance

- a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- b. Measurements are made with all external cables disconnected and connector P2 strapped as indicated.
- c. Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR P2



BOTTOM VIEW OF CHASSIS

Ref design		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	5755	YDC amplifier	1	150	0							3	—	250,000	2	1.5	1.2 meg	4, 5 to 9	6.3 ac	<4
	V1B			8	125	500,000							6	—	32,000	7	1.5	1.2 meg			
XV2	V2	6AU6WA	YDC amplifier	5	86	247,000	Same as cathode			6	73	11,000	1	-2.1	890,000	2, 7	0	0	3 to 4	6.3 ac	<2
XV3	V3A	5755	XDC amplifier	1	150	0							3	—	250,000		1	1.2 meg	4, 5 to 9	6.3 ac	<4
	V3B			8	125	510,000							6	—	32,000		1	1.2 meg			
XV4	V4	6AU6WA	XDC amplifier	5	86	217,000	Same as cathode			6	75	11,000	1	-2.1	890,000	2, 7	0	0	3 to 4	6.3 ac	<4
XV5	V5A	5670	Y cathode follower	6	150	0							7	-1.4	640,000	8	—	34,800	9 to 1	6.3 ac	<2
	V5B		X cathode follower	4	150	0							3	-1.7	640,000	2	—	34,800			

< Less than.

Figure 6A. Sweep generator 8518032—voltage and resistance chart.

RA PD 417719

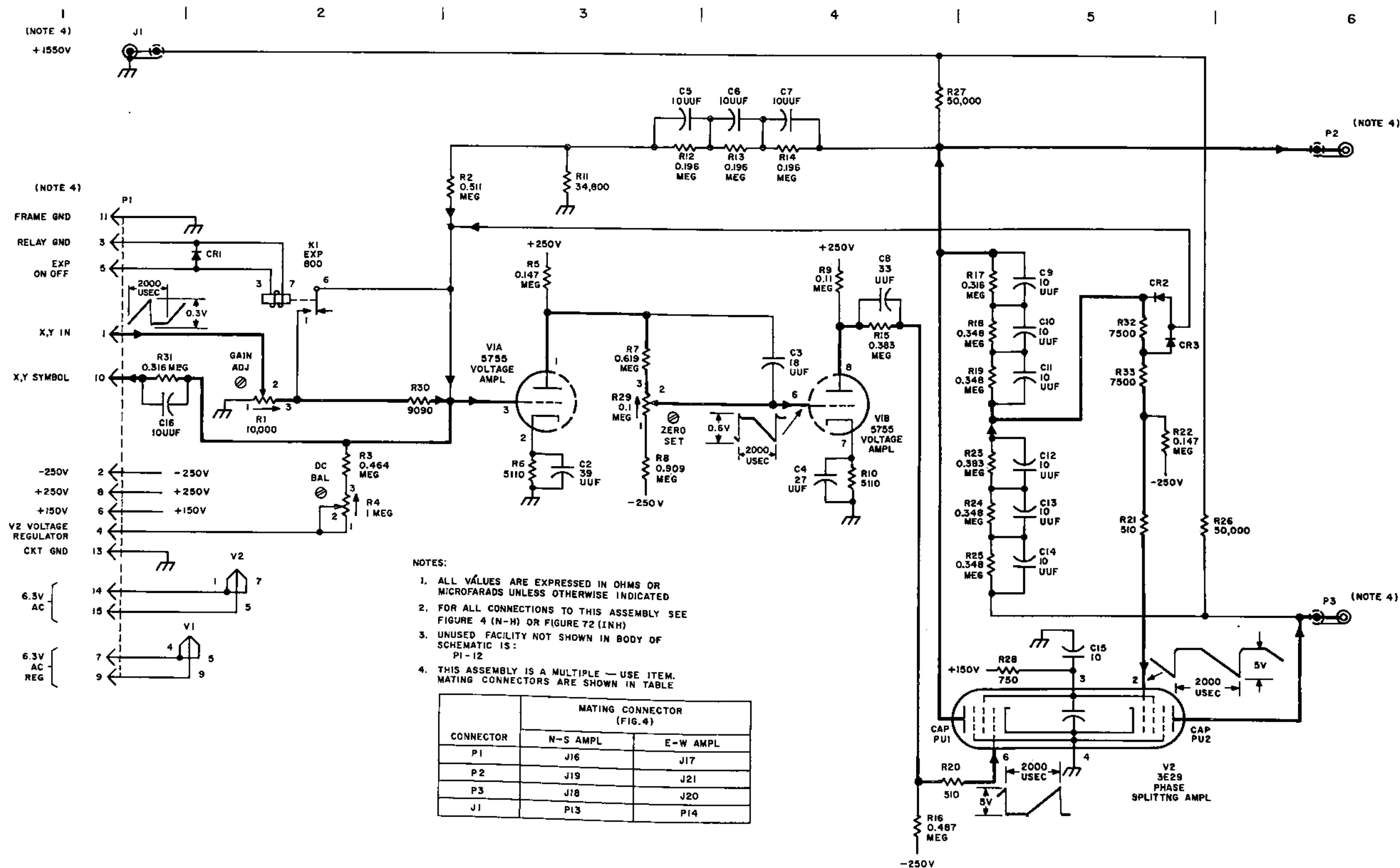


Figure 7 (U). PPI DC amplifier 9005503—schematic diagram.

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## PPI DC Amplifier 9005503—Apparatus List

Reference description	Ordinance part No.	Part description
C2 .....	9009851	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 39 $\mu$ f $\pm 5\%$ , type CM15B390J.
C3 .....	8515610	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 18 $\mu$ f $\pm 10\%$ , type CM15B180K.
C4 .....	9003320	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 27v $\mu$ f $\pm 5\%$ , type CM15B270J.
C5, C6, C7, C9, C10, C11, C12, C13, C14.	9000552	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 10 $\mu$ f $\pm 20\%$ .
C8 .....	9009147	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 33 $\mu$ f $\pm 10\%$ , type CM15B330K.
C15 .....	8519548	CAPACITOR, FIXED, ELECTROLYTIC: 400V dc, 10 $\mu$ f
C16 .....		CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 10 $\mu$ f $\pm 5\%$ , type CM15B100J.
CR1 .....	9024987	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon; type 1N484.
CR2, CR3 .....	8516150	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon
J1 .....	9000577	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 male cont.
K1 .....	9006875	RELAY, ARMATURE: dpdt; cont 115v ac or 26v dc, 0.5 amp, coil 800 ohm $\pm 10\%$ .
P1 .....	7598051	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.
P2, P3 .....	8519513	CONNECTOR, PLUG, ELECTRICAL: stght, 1 female cont.
R1 .....	8518356	RESISTOR, VARIABLE: composition; $\frac{1}{2}$ w, 10,000 ohm $\pm 20\%$
R2 .....	9003074	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.511 meg $\pm 1\%$
R3 .....	9003066	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.464 meg $\pm 1\%$
R4 .....	9000662	RESISTOR, VARIABLE: composition; $\frac{1}{2}$ w, 1 meg $\pm 20\%$
R5 .....	9002945	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.147 meg $\pm 1\%$
R6, R10 .....	9002967	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 5,110 ohm $\pm 1\%$
R7 .....	9003641	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.619 meg $\pm 1\%$
R8 .....	9003075	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.909 meg $\pm 1\%$
R9 .....	9003643	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.11 meg $\pm 1\%$
R11 .....	9003017	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 34,800 ohm $\pm 1\%$
R12, R13, R14 .....	8518556	RESISTOR, FIXED, FILM: 2w, 0.196 meg $\pm 1\%$
R15 .....	9003064	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.383 meg $\pm 1\%$
R16 .....	9003642	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.487 meg $\pm 1\%$ (WECO- GA53314A4873)
R17 .....	8518557	RESISTOR, FIXED, FILM: 2w, 0.316 meg $\pm 1\%$
R18, R19, R24, R25 .....	8518558	RESISTOR, FIXED, FILM: 2w, 0.348 meg $\pm 1\%$
R20, R21 .....	MS35043-80	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 510 ohm $\pm 5\%$ , type RC20GF511J.
R22 .....	85118553	RESISTOR, FIXED, FILM: 1w, 0.147 meg $\pm 1\%$
R23 .....	8518575	RESISTOR, FIXED, FILM: 2w, 0.383 meg $\pm 1\%$
R26, R27 .....	8517902	RESISTOR, FIXED, WIRE WOUND: power type, 50w, 50,000 ohm $\pm 1\%$ .
R28 .....	MS35043-84	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 750 ohm $\pm 5\%$ , type RC20GF751J.
R29 .....	9000661	RESISTOR, VARIABLE: composition; $\frac{1}{2}$ w, 0.1 meg $\pm 20\%$
R30 .....	9003930	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 9,090 ohm $\pm 1\%$
R31 .....	9002961	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.316 meg $\pm 1\%$
R32, R33 .....	9011295	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 7,500 ohm $\pm 1\%$
V1 .....	7599350	ELECTRON TUBE: type 5755
V2 .....	8034157	ELECTRON TUBE: type 3E29

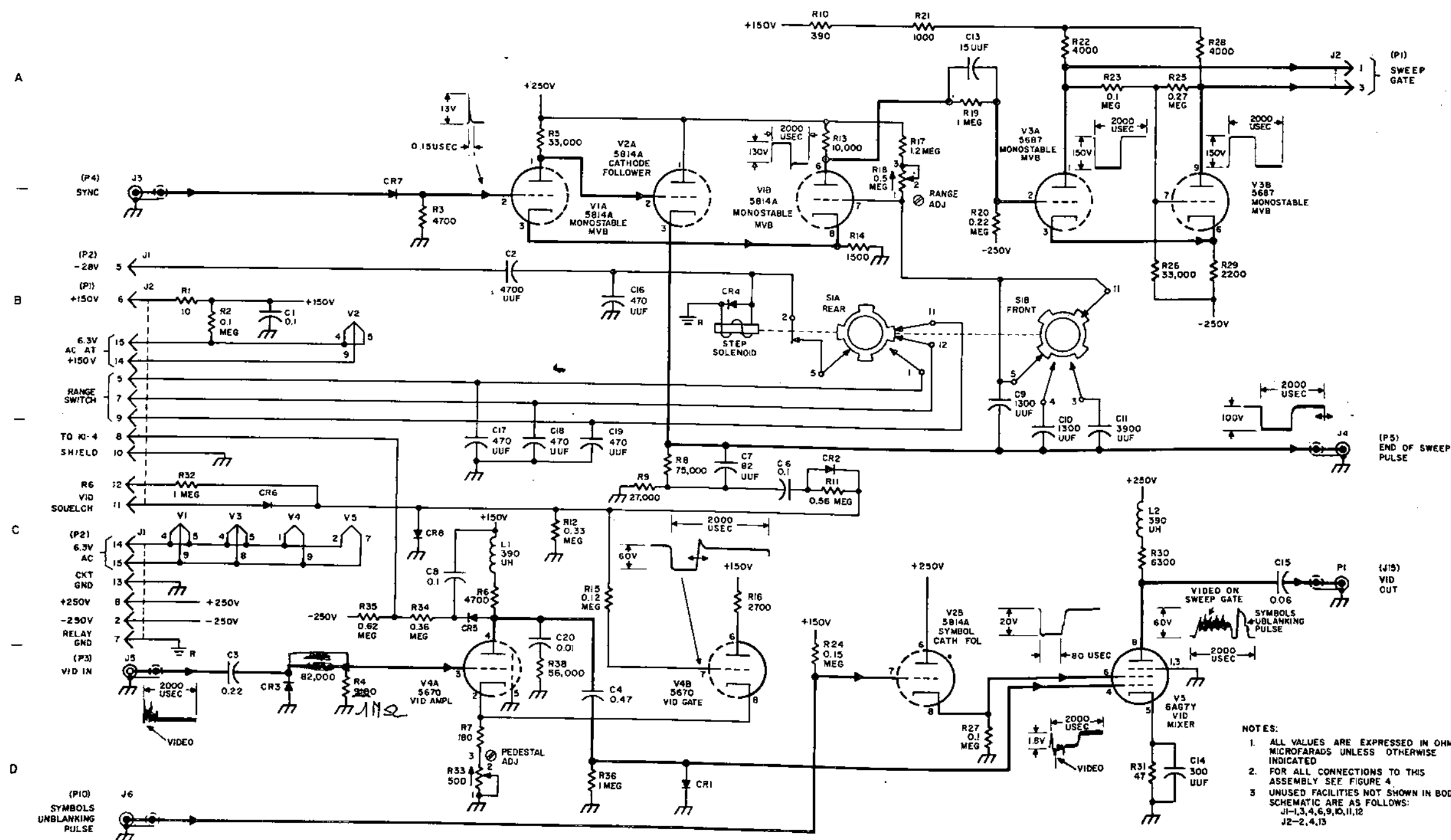
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Figure 8. (U) PPI video amplifier 9142869 - schematic diagram.

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PPI Video Amplifier 9142869 - Apparatus List

Reference designation	Ordinance part No.	Part description	Reference designation	Ordinance part No.	Part description
C1, C6-----	9003804	CAPACITOR, FIXED, PAPER DIELECTRIC: 400v dc, 0.1 $\mu$ f $\pm$ 10%, type CP10A1EE104K.	J3, J4, J6-----	9137154	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 male cont.
C2-----	9000767	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 4,700 $\mu$ f $\pm$ 10%, type CP09A1EF472K.	J5-----	8531071	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG625B/U.
C3-----	9144164	CAPACITOR, FIXED, PAPER DIELECTRIC: 200v dc, 0.22 $\mu$ f $\pm$ 20%.	L1, L2-----	9001020	COIL, RADIO FREQUENCY: 390 $\mu$ h $\pm$ 5% at 790 kc, 5.3 ohm dc
C4-----	9000759	CAPACITOR, FIXED, PAPER DIELECTRIC: 400v dc, 0.47 $\mu$ f $\pm$ 10%, type CP09A1EF474K.	P1-----	9000771	LEAD, ELECTRICAL: round, 1 male cont, 15,000v ac or dc
C7-----	9003791	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 82 $\mu$ f $\pm$ 5%, type CM15B820J.	R1-----	MS35043-39	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 10 ohm $\pm$ 5% type RC20GF100J.
C8-----	9003765	CAPACITOR, FIXED, PAPER DIELECTRIC: 200v dc, 0.1 $\mu$ f $\pm$ 10%, type CP09A1EC104K.	R2, R27-----	MS35043-135	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm$ 5%, type RC20GF104J.
C9, C10-----	521057	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 1,300 $\mu$ f $\pm$ 5%, type CM30B132J.	R3, R6-----	MS35043-103	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4,700 ohm $\pm$ 5%, type RC20GF472J.
C11-----	7631709	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 3,900 $\mu$ f $\pm$ 5%, type CM35B392J.	R4-----	MS35043-110	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 9100 ohm $\pm$ 5%, type RC20GF912J.
C13-----	522225	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 15 $\mu$ f $\pm$ 10%, type CM20B150K.	R5-----	MS35043-123	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 33,000 ohm $\pm$ 5%, type RC20GF333J.
C14-----	9000770	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 300 $\mu$ f $\pm$ 5%, type CM15B301J.	R7-----	MS35043-69	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 180 ohm $\pm$ 5%, type RC20GF181J.
C15-----	9144222	CAPACITOR, FIXED, PLASTIC DIELECTRIC: 10,000v dc, 0.06 $\mu$ f $\pm$ 20%.	R8-----	MS35043-132	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 75,000 ohm $\pm$ 5%, type RC20GF753J.
C16, C17, C18, C19-----	8515604	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 470 $\mu$ f $\pm$ 5%, type CM15B471J.	R9-----	MS35043-121	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 27,000 ohm $\pm$ 5%, type RC20GF273J.
C20-----	8607081	CAPACITOR, FIXED, PAPER DIELECTRIC: 400v dc, 0.01 $\mu$ f $\pm$ 10%.	R10-----	MS35045-77	RESISTOR, FIXED, COMPOSITION: 2w, 390 ohm $\pm$ 5%, type RC42GF391J.
CR1-----	9009998	SEMICONDUCTOR DEVICE, DIODE: rectifying silicon; type 1N484A.	R11-----	MS35043-153	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.56 meg $\pm$ 5%, type RC20GF564J.
CR2, CR3, CR7-----	8177408	SEMICONDUCTOR DEVICE, DIODE: rectifying germanium; type 1N198.	R12-----	MS35043-147	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.33 meg $\pm$ 5%, type RC20GF334J.
CR4-----	9006781	SEMICONDUCTOR DEVICE, DIODE: rectifying	R13-----	MS35045-111	RESISTOR, FIXED, COMPOSITION: 2w, 10,000 ohm $\pm$ 5%, type RC42GF103J.
CR5-----	9009258	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon; type 1N485A.	R14-----	MS35044-105	RESISTOR, FIXED, COMPOSITION: 1w, 1,500 ohm $\pm$ 5%, type RC32GF152J.
CR6-----	8516150	SEMICONDUCTOR DEVICE, DIODE: rectifying	R15-----	MS35043-137	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.12 meg $\pm$ 5%, type RC20GF124J.
CR8-----	8516150	SEMICONDUCTOR DEVICE, DIODE: rectifying	R16-----	MS35043-97	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2,700 ohm $\pm$ 5%, type RC20GF272J.
J1, J2-----	7598934	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.			

Figure 8. (U) PPI video amplifier 9142869 - schematic diagram--Continued.

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PPI Video Amplifier 9142869 - Apparatus List - Continued

Reference designation	Ordnance part No.	Part description
R17 -----	MS35043-161	RESISTOR, FIXED, COMPOSITION: 1/2w, 1.2 meg ±5%, type RC20GF125J.
R18 -----	9000758	RESISTOR, VARIABLE: composition; 1/2w, 0.5 meg ±20%
R19, R32, R36 -----	MS35043-159	RESISTOR, FIXED, COMPOSITION: 1/2w, 1 meg ±5%, type RC20GF105J.
R20 -----	MS35043-143	RESISTOR, FIXED, COMPOSITION: 1/2w, 0.22 meg ±5%, type RC20GF224J.
R21 -----	8288576	RESISTOR, FIXED, WIRE WOUND: power type, rd, axial term., 5w, 1,000 ohm, type RW55G102.
R22, R28 -----	7602543	RESISTOR, FIXED, WIRE WOUND: power type, rd, axial term., 5w, 4,000 ohm, ±5%, type RW55G402.
R23 -----	MS35044-149	RESISTOR, FIXED, COMPOSITION: 1w, 0.1 meg ±5%, type RC32CF104J.
R24 -----	MS35043-139	RESISTOR, FIXED, COMPOSITION: 1/2w, 0.15 meg ±5%, type RC20GF154J.
R25 -----	MS35043-145	RESISTOR, FIXED, COMPOSITION: 1/2w, 0.27 meg ±5%, type RC20GF274J.
R26 -----	MS35044-137	RESISTOR, FIXED, COMPOSITION: 1w, 33,000 ohm ±5%, type RC32CF333J.
R29 -----	9000760	RESISTOR, FIXED, WIRE WOUND: power type, fl, tab term., 22w, 2,200 ohm, type RW21G222.
R30 -----	7599239	RESISTOR, FIXED, WIRE WOUND: power type, 10w, 6,300 ohm ±5%.
R31 -----	MS35043-55	RESISTOR, FIXED, COMPOSITION: 1/2w, 47 ohm ±5%, type RC20GF470J.
R33 -----	9003836	RESISTOR, VARIABLE: composition; 1/2w, 500 ohm ±20%
R34 -----	MS35043-148	RESISTOR, FIXED, COMPOSITION: 1/2w, 0.36 meg ±5%, type RC20GF364J.
R35 -----	MS35043-154	RESISTOR, FIXED, COMPOSITION: 1/2w, 0.62 meg ±5%, type RC20GF624J.
R37 -----	MS35043-133	RESISTOR, FIXED, COMPOSITION: 1/2w, 82,000 ohm ±5%, type RC20GF823J.
R38 -----	MS35043-129	RESISTOR, FIXED, COMPOSITION: 1/2w, 56,000 ohm ±5%, type RC20GF563J.
S1 -----	8518673	SWITCH-SOLENOID ASSEMBLY: 3 pole 12 position, 2 sec
V1, V2 -----	8298939	ELECTRON TUBE: type 5814A
V3 -----	7599315	ELECTRON TUBE: type 5687
V4 -----	8518396	ELECTRON TUBE: type 5670
V5 -----	9000761	ELECTRON TUBE: type 6AC7Y

Figure 8. PPI video amplifier 9142869 - schematic diagram—Continued.

## MEASUREMENT NOTES

## 1. General

**Warning:** Serious injury may result from flying glass fragments if cathode-ray tube is broken. Use extreme care and wear protective mask and gloves when handling cathode-ray tube.

- Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- Notation 2 to 7 in the Pin column indicates that measurement is made between pins 2 and 7; notation 4, 5 to 9 indicates that measurement is made between pin 4 and pin 9 or pin 5 and pin 9; notation 4, 5, 9 indicates that measurement is made between pin 4 and ground, pin 5 and ground, or pin 9 and ground.
- All values given are typical.

## 2. Voltage

**Warning:** High voltage used in this equipment may cause death on contact.

a. Measurements are made with system energized through low voltage condition, and with cables removed from J3, J4, J5, and J6.

b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.

c. Voltages are +dc measured to ground, unless otherwise indicated.

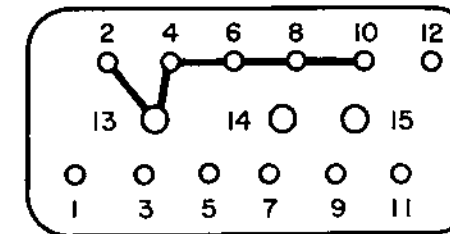
d. A dash in the Volts column indicates a voltage of no significance.

## 3. Resistance

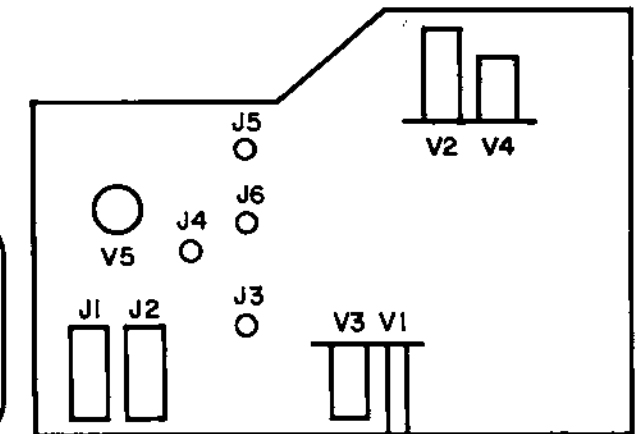
a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.

b. Measurements are made with all external cables disconnected, with connector J1 strapped as indicated, and with pin 6 of connector J2 strapped to ground.

c. Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR J1



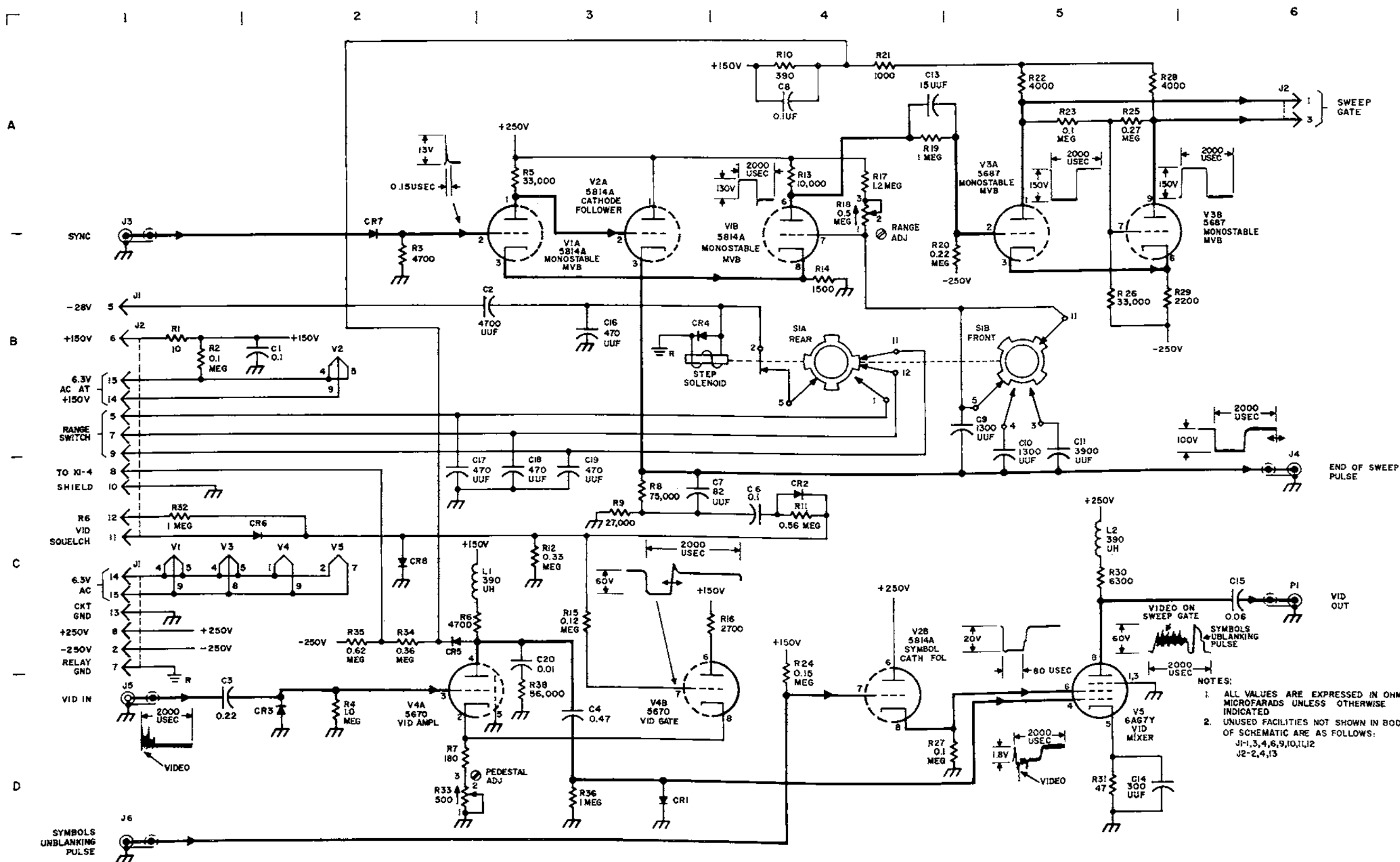
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Ref design		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	5814A	Monostable multivibrator	1	235	33,000							2	0	4,700	3	19	1,500	4, 5 to 9	6.3 ac	< 1
	V1B			6	117	9,900							7	20	1.5 meg	8	19	1,500			
XV2	V2A	5814A	Cathode follower	1	250	0							2	235	33,000	3	235	100,000	4, 5 to 9	6.3 ac	< 3
	V2B		Symbol cathode follower	6	250	0							7	150	150,000	8	150	100,000			
XV3	V3A	5687	Monostable multi-vibrator	1	80	5,200							2	-180	180,000	3	-160	2,200	4, 5 to 8	6.3 ac	< 1
	V3B			9	-75	5,300							7	-160	25,000	6	-160	2,200			
XV4	V4A	5670	Video amplifier	4	135	500Δ							3	0	9,000Δ	2	3	190	1 to 9	6.3 ac	< 1
	V4B		Video gate	6	142	2,700							7	—	160,000Δ	8	3	190			
XV5	V5	6AG7Y	Video mixer	8	44	6,300	1, 3	0	0	6	150	100,000	4	0	8Δ	5	2	47	2 to 7	6.3 ac	< 1

< Less than. Δ Reverse meter leads if reading is not obtained.

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Figure 8A. (U) PPI video amplifier 9142869 - voltage and resistance chart.



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Figure 8.1 (U). PPI video amplifier 9985598—schematic diagram.

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(U) PPI Video Amplifier 9985598—Apparatus List

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol $\pm$ %	Watts	Volts		
C1	0.1	10		400	9003804	
C2	4700 $\mu$ f	10		600	9000767	
C3	0.22	20		200	9144164	
C4	0.47	10		400	9000759	
C6	0.1	10		400	9003804	
C7	82 $\mu$ f	5		300	9003791	
C8	0.1	10		200	9003765	
C9	1300 $\mu$ f	5		500	521057	
C10	1300 $\mu$ f	5		500	521057	
C11	3900 $\mu$ f	5		500	7631079	
C13	15 $\mu$ f	10		500	522225	
C14	300 $\mu$ f	5		300	9000770	
C15	0.06	20		10000	9144222	
C16	470 $\mu$ f	5		300	8515604	
C17	470 $\mu$ f	5		300	8515604	
C18	470 $\mu$ f	5		300	8515604	
C19	470 $\mu$ f	5		300	8515604	
C20	.01	10		400	8607081	
CR1					9009998	
CR2					8177408	
CR3					8177408	
CR4					9009258	
CR5					9009258	
CR6					8516150	
CR7					8177408	
CR8					8516150	
J1					7598934	
J2					7598934	
J3					9000578	
J4					9000578	
J5					8531071	
J6					9000578	
L1	390 $\mu$ h	10			9001020	
L2	390 $\mu$ h	10			9001020	
P1					9000771	
R1	10	5	$\frac{1}{2}$		MS35043-39	
R2	0.1 meg	5	$\frac{1}{2}$		MS35043-135	
R3	4700	5	$\frac{1}{2}$		8177583	
R4	1.0 meg	5	$\frac{1}{2}$		MS35043-159	

(U) PPI Video Amplifier 9985598—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol $\pm$ %	Watts	Volts		
R5	33,000	5	$\frac{1}{2}$		8572332	
R6	4700	5	$\frac{1}{2}$		8177583	
R7	180	5	$\frac{1}{2}$		MS35043-69	
R8	75,000	5	$\frac{1}{2}$		8192484	
R9	27,000	5	$\frac{1}{2}$		8531328	
R10	390	5	2		MS35045-77	
R11	0.56 meg	5	$\frac{1}{2}$		8515581	
R12	0.33 meg	5	$\frac{1}{2}$		8521223	
R13	10,000	5	2		MS35045-111	
R14	1500	5	1		8177434	
R15	0.12 meg	5	$\frac{1}{2}$		8247616	
R16	2700	5	$\frac{1}{2}$		8515769	
R17	1.2 meg	5	$\frac{1}{2}$		MS35043-161	
R18	0.5 meg	20	$\frac{1}{3}$		9000758	
R19	1 meg	5	$\frac{1}{2}$		MS35043-159	
R20	0.22 meg	5	$\frac{1}{2}$		MS35043-143	
R21	1000	5	5		8288576	
R22	4000	5	5		7602543	
R23	0.1 meg	5	1		8515585	
R24	0.15 meg	5	$\frac{1}{2}$		MS35143-139	
R25	0.27 meg	5	$\frac{1}{2}$		8515725	
R26	33,000	5	1		8531014	
R27	0.1 meg	5	$\frac{1}{2}$		MS35043-135	
R28	4000	5	5		7602543	
R29	2200	5	22		9000760	
R30	6300	5	10		7599239	
R31	47	5	$\frac{1}{2}$		8515746	
R32	1 meg	5	$\frac{1}{2}$		MS35043-159	
R33	500	20	$\frac{1}{3}$		9003836	
R34	0.36 meg	5	$\frac{1}{2}$		MS35043-148	
R35	0.62 meg	5	$\frac{1}{2}$		8515758	
R36	1 meg	5	$\frac{1}{2}$		MS35043-159	
R38	56,000	5	$\frac{1}{2}$		MS35043-129	
S1					8518637	
V1					5814A	
V2					5814A	
V3					5687	
V4					5670	
V5					6AG7Y	

## (U) PPI Video Amplifier 9985598—Voltage and Resistance Chart

## MEASUREMENT NOTES

## 1. General

**Warning:** Serious injury may result from flying glass fragments if cathode-ray tube is broken. Use extreme care and wear protective mask and gloves when handling cathode-ray tube.

a. Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.

b. Notation 2 to 7 in the Pin column indicates that

measurement is made between pins 2 and 7; notation 4, 5 to 9 indicates that measurement is made between pin 4 and pin 9 or pin 5 and pin 9; notation 4, 5, 9 indicates that measurement is made between pin 4 and ground, pin 5 and ground, or pin 9 and ground.

c. All values given are typical.

## 2. Voltage

**Warning:** High voltage used in this equipment may cause death on contact.

a. Measurements are made with system energized through low voltage conditions, and with cables removed from J3, J4, J5, and J6.

b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.

c. Voltages are +dc measured to ground, unless otherwise indicated.

d. A dash in the Volts column indicates a voltage of no significance.

## 3. Resistance

a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.

b. Measurements are made with all external cables disconnected, with pins 2, 8 and 13 on connector J1 strapped together, and with pin 6 of connector J3 strapped to ground.

c. Resistances are measured to ground unless otherwise indicated.

Ref design		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	5814A	Monostable multivibrator	1	235	33,000							2	0	4,700	3	19	1,500			
	V1B			6	117	9,900							7	20	1.5 meg	8	19	1,500	4, 5 to 9	6.3 ac	< 1
XV2	V2A	5814A	Cathode follower	1	250	0							2	235	33,000	3	235	100,000	4, 5 to 9	6.3 ac	< 3
	V2B		Symbol cathode follower	6	250	0							7	150	150,000	8	150	100,000	4, 5, 9	150	100,000
XV3	V3A	5687	Monostable multivibrator	1	80	5,200							2	-180	180,000	3	-160	2,200			
	V3B			9	-75	5,300							7	-160	25,000	6	-160	2,200	4, 5 to 8	6.3 ac	< 1
XV4	V4A	5670	Video amplifier	4	135	4,700Δ							3	0	1 megΔ	2	3	430			
	V4B		Video gate	6	142	2,700							7	—	450,000Δ	8	3	430	1 to 9	6.3 ac	< 1
XV5	V5	6AGTY	Video mixer	8	44	6,300	1, 3	0	0	6	150	100,000	4	0	1 megΔ	5	2	47	2 to 7	6.3 ac	< 1

< Less than.

Δ Reverse meter leads if reading is not obtained.

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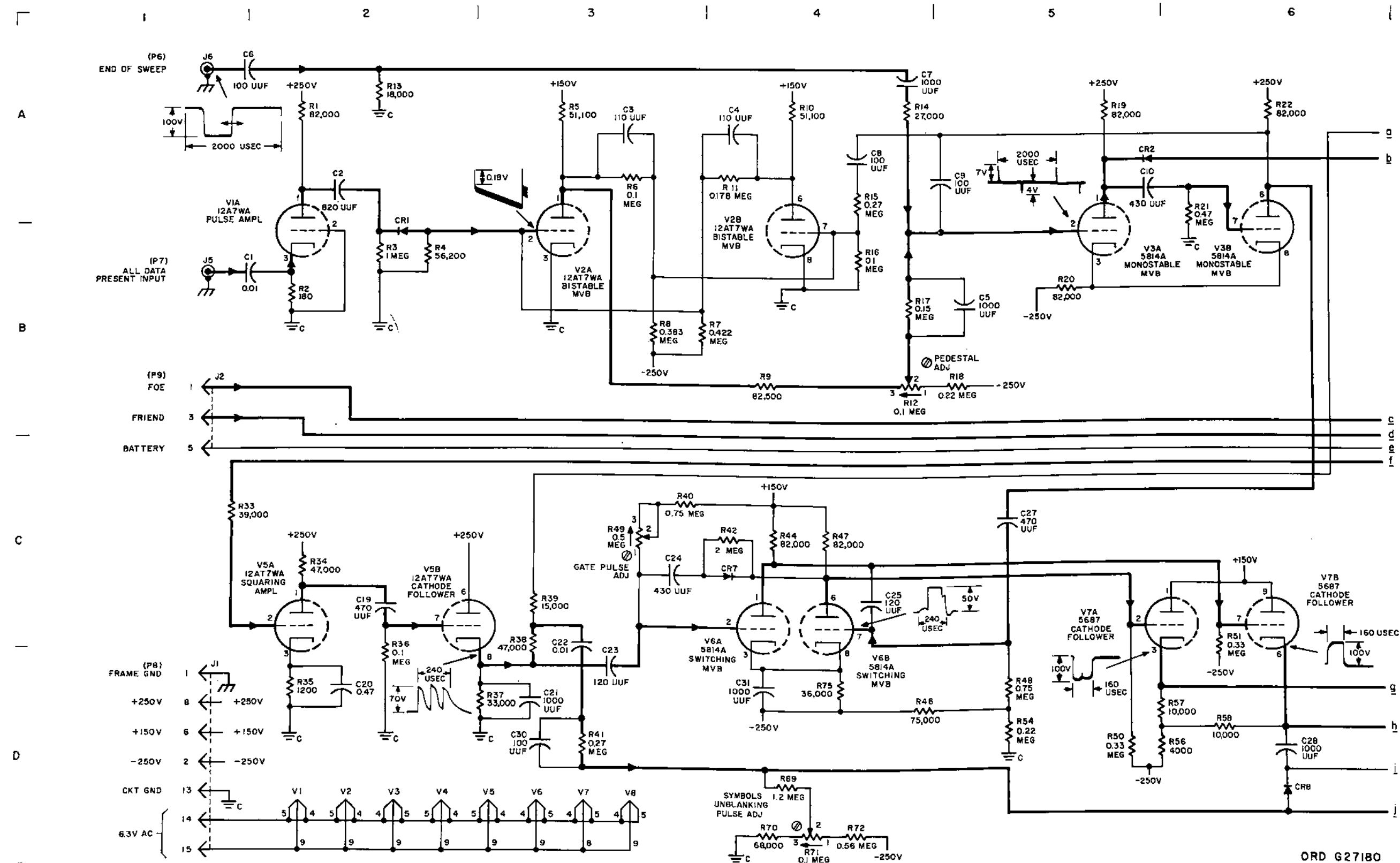
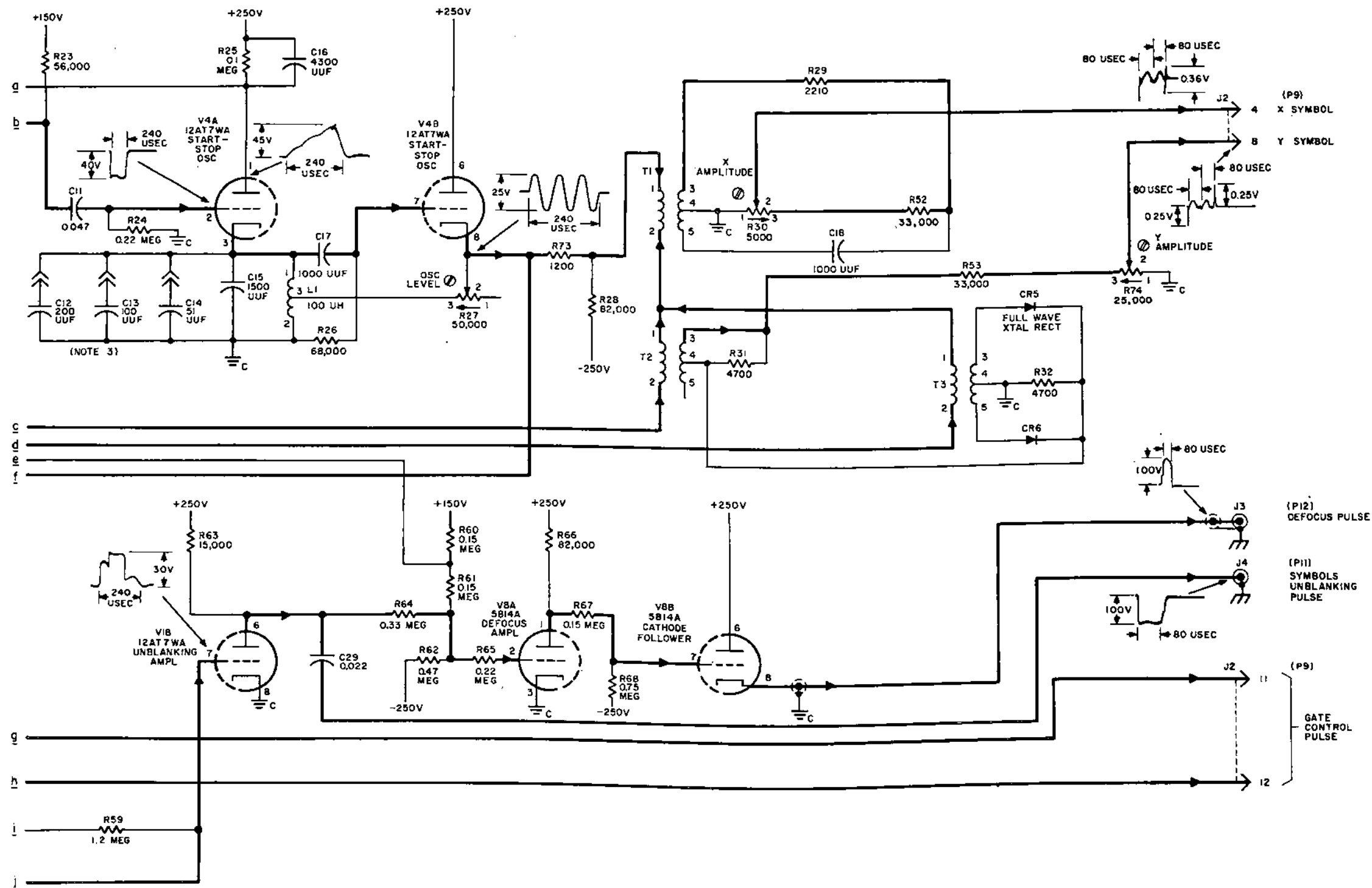


Figure 9 (U). PPI marker generator 9007680—schematic diagram.

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## NOTES:

1. ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
2. FOR ALL CONNECTIONS TO THIS ASSEMBLY SEE FIGURE 4
3. STRAP COMBINATIONS OF C12, C13, C14 DURING UNIT TEST PROCEDURE TO BEST APPROXIMATE 80 USEC/CYCLE AT V4 TERMINAL 8
4. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
J1- 3,4,5,7,9,10,11,12  
J2- 2,6,7,9,10,13,14,15

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PPI Marker Generator 9007680 - Apparatus List

Reference designation	Ordnance part No.	Part description
C1, C22 -----	522119	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f $\pm$ 10%, type CM35B103K.
C2 -----	9000837	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 820 $\mu$ f $\pm$ 10%, type CM20B821K.
C3, C4 -----	8516091	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 110 $\mu$ f $\pm$ 5%, type CM15B111J.
C5, C7, C17, C18, C21, C28	8107779	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 1,000 $\mu$ f $\pm$ 10%, type CM20B102K.
C6, C30 -----	8177573	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 100 $\mu$ f $\pm$ 10%, type CM15B101K.
C8, C9 -----	522235	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 100 $\mu$ f $\pm$ 10%, type CM20B101K.
C10, C24 -----	522311	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 430 $\mu$ f $\pm$ 5%, type CM20B431J.
C11 -----	9002864	CAPACITOR, FIXED, PAPER DIELECTRIC: 400v dc, 0.047 $\mu$ f $\pm$ 10%, type CP10A1EE473K.
C12 -----	8521281	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 200 $\mu$ f $\pm$ 5%, type CM15B201J.
C13 -----	8515520	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 100 $\mu$ f $\pm$ 5%, type CM15B101J.
C14 -----	9000765	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 51 $\mu$ f $\pm$ 5%, type CM15B510J.
C15 -----	521058	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 1,500 $\mu$ f $\pm$ 5%, type CM30B152J.
C16 -----	9002896	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 4,300 $\mu$ f $\pm$ 5%, type CM35B432J.
C19, C27 -----	MS35007-28	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 470 $\mu$ f $\pm$ 10%, type CM20B471K.
C20 -----	8519275	CAPACITOR, FIXED, PAPER DIELECTRIC: 200v dc, 0.47 $\mu$ f $\pm$ 10%, type CP10A1EC474K.
C23, C25 -----	522236	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 120 $\mu$ f $\pm$ 10%, type CM20B121K.
C29 -----	9002909	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.022 $\mu$ f $\pm$ 10%, type CP10A1EF223K.
C31 -----	8107779	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 1,000 $\mu$ f $\pm$ 10%, type CM20B102K.
CR1, CR2, CR5, CR6, CR8	8516150	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon
CR7 -----	8519051	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon
J1, J2 -----	7598934	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.
J3, J4, J5, J6 -----	9000577	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 male cont.
L1 -----	8519516	COIL, RADIO FREQUENCY: 100 $\mu$ h $\pm$ 1%, 43 ohm dc

Reference designation	Ordnance part No.	Part description
R1 -----	MS35044-147	RESISTOR, FIXED, COMPOSITION: 1w, 82,000 ohm $\pm$ 5%, type RC32GF823J.
R2 -----	MS35043-69	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 180 ohm $\pm$ 5%, type RC20GF181J.
R3 -----	MS35043-159	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1 meg $\pm$ 5%, type RC20GF105J.
R4 -----	9002969	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 56,200 ohm $\pm$ 1%
R5 -----	8519434	RESISTOR, FIXED, FILM: 1w, 51,100 ohm $\pm$ 1%
R6, R16 -----	9002937	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.1 meg $\pm$ 1%
R7 -----	9002964	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.422 meg $\pm$ 1%
R8 -----	9003064	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.383 meg $\pm$ 1%
R9 -----	9003076	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 82,500 ohm $\pm$ 1%
R10 -----	9003067	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 51,100 ohm $\pm$ 1%
R11 -----	9003071	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 0.178 meg $\pm$ 1%
R12 -----	9000661	RESISTOR, VARIABLE: composition; 1/3w, 0.1 meg $\pm$ 20%
R13 -----	MS35043-117	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 18,000 ohm $\pm$ 5%, type RC20GF183J.
R14 -----	MS35043-121	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 27,000 ohm $\pm$ 5%, type RC20GF273J.
R15 -----	MS35043-145	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.27 meg $\pm$ 5%, type RC20GF274J.
R17 -----	MS35043-139	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.15 meg $\pm$ 5%, type RC20GF154J.
R18, R14, R54, R65 -----	MS35043-143	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.22 meg $\pm$ 5%, type RC20GF224J.
R19 -----	MS35043-133	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 82,000 ohm $\pm$ 5%, type RC20GF823J.
R20, R22, R28 -----	MS35045-133	RESISTOR, FIXED, COMPOSITION: 2w, 82,000 ohm $\pm$ 5%, type RC42GF823J.
R21, R62 -----	MS35043-151	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.47 meg $\pm$ 5%, type RC20GF474J.
R23 -----	MS35043-129	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 56,000 ohm $\pm$ 5%, type RC20GF563J.
R25 -----	MS35044-149	RESISTOR, FIXED, COMPOSITION: 1w, 0.1 meg $\pm$ 5%, type RC32GF104J.
R26 -----	MS35043-131	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 68,000 ohm $\pm$ 5%, type RC20GF683J.
R27 -----	9003014	RESISTOR, VARIABLE: composition; $\frac{1}{2}$ w, 50,000 ohm $\pm$ 20%.
R29 -----	9003068	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 2,210 ohm $\pm$ 1%
R30 -----	9002951	RESISTOR, VARIABLE: composition; $\frac{1}{2}$ w, 5,000 ohm $\pm$ 20%
R31, R32 -----	MS35043-103	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4,700 ohm $\pm$ 5%, type RC20GF472J.

Figure 9. (U) PPI marker generator 9007680—schematic diagram—Continued

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PPI Marker Generator 9007680 - Apparatus List - Continued

Reference designation	Ordinance part No.	Part description	Reference designation	Ordinance part No.	Part description
R33-----	MS35043-125	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 39,000 ohm $\pm 5\%$ , type RC20GF393J.	R56-----	7602543	RESISTOR, FIXED, WIRE WOUND: power type, rd, axial term., 5w, 4,000 ohm $\pm 5\%$ , type RW55G402.
R34-----	MS35044-141	RESISTOR, FIXED, COMPOSITION: 1w, 47,000 ohm $\pm 5\%$ , type RC32GF473J.	R57-----	9009619	RESISTOR, FIXED, WIRE WOUND: power type, rd, axial term., 10w, 10,000 ohm $\pm 5\%$ , type RW56G103.
R35-----	MS35043-89	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 1,200 ohm $\pm 5\%$ , type RC20GF122J.	R58-----	MS35044-125	RESISTOR, FIXED, COMPOSITION: 1w, 10,000 ohm $\pm 5\%$ , type RC32GF103J.
R36-----	MS35043-135	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.1 meg $\pm 5\%$ , type RC20GF104J.	R59-----	MS35043-161	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 1.2 meg $\pm 5\%$ , type RC20GF125J.
R37-----	MS35043-123	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 33,000 ohm $\pm 5\%$ , type RC20GF333J.	R60, R61, R67-----	MS35043-139	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.15 meg $\pm 5\%$ , type RC20GF154J.
R38-----	MS35043-127	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 47,000 ohm $\pm 5\%$ , type RC20GF473J.	R63-----	MS35043-115	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 15,000 ohm $\pm 5\%$ , type RC20GF153J.
R39-----	MS35043-115	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 15,000 ohm $\pm 5\%$ , type RC20GF153J.	R64-----	MS35043-147	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.33 meg $\pm 5\%$ , type RC20GF334J.
R40-----	MS35043-156	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.75 meg $\pm 5\%$ , type RC20GF754J.	R66-----	MS35044-147	RESISTOR, FIXED, COMPOSITION: 1w, 82,000 ohm $\pm 5\%$ , type RC32GF823J.
R41-----	MS35043-145	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.27 meg $\pm 5\%$ , type RC20GF274J.	R68-----	MS35043-156	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.75 meg $\pm 5\%$ , type RC20GF754J.
R42-----	MS35043-166	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 2 meg $\pm 5\%$ , type RC20GF205J.	R69-----	MS35043-161	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 1.2 meg $\pm 5\%$ , type RC20GF125J.
R44, R47-----	MS35044-147	RESISTOR, FIXED, COMPOSITION: 1w, 82,000 ohm $\pm 5\%$ , type RC32GF823J.	R70-----	MS35043-131	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 68,000 ohm $\pm 5\%$ , type RC20GF683J.
R46-----	MS35043-132	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 75,000 ohm $\pm 5\%$ , type RC20GF753J.	R71-----	9000661	RESISTOR, VARIABLE: composition; $\frac{1}{3}w$ , 0.1 meg $\pm 20\%$ .
R48-----	MS35043-156	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.75 meg $\pm 5\%$ , type RC20GF754J.	R72-----	MS35043-153	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.56 meg $\pm 5\%$ , type RC20GF564J.
R49-----	9000758	RESISTOR, VARIABLE: composition; $\frac{1}{2}w$ , 0.5 meg $\pm 20\%$ .	R73-----	MS35043-89	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 1,200 ohm $\pm 5\%$ , type RC20GF122J.
R50, R51-----	MS35043-147	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.33 meg $\pm 5\%$ , type RC20GF334J.	R74-----	9002952	RESISTOR, VARIABLE: composition; $\frac{1}{2}w$ , 25,000 ohm $\pm 20\%$ .
R52, R53-----	MS35043-123	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 33,000 ohm $\pm 5\%$ , type RC20GF333J.	R75-----	MS35044-138	RESISTOR, FIXED, COMPOSITION: 1w, 36,000 ohm $\pm 5\%$ , type RC32G363J.
R54-----	MS35043-143	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}w$ , 0.22 meg $\pm 5\%$ , type RC20GF224J.	T1, T2, T3-----	9007474	TRANSFORMER, AUDIO FREQUENCY: coupling, dc resistance 54 ohm input, 300 ohm output.
			V1, V2, V4, V5-----	8298933	ELECTRON TUBE: type 12AT7WA
			V3, V6, V8-----	8298939	ELECTRON TUBE: type 5814A
			V7-----	7599315	ELECTRON TUBE: type 5687

Figure 9. (U) PPI marker generator 9007680—schematic diagram—Continued

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TM 9-1430-257-20

MEASUREMENT NOTES

1. General

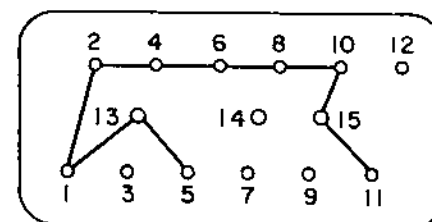
- Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- Notation 4, 5 to 9 in the Pin column indicates that measurement is made between pins 4 or 5 and 9.
- A dash in the Volts or Ohms column indicates a voltage of no significance or a resistance in excess of 10 megohms.
- All values given are typical.

2. Voltage

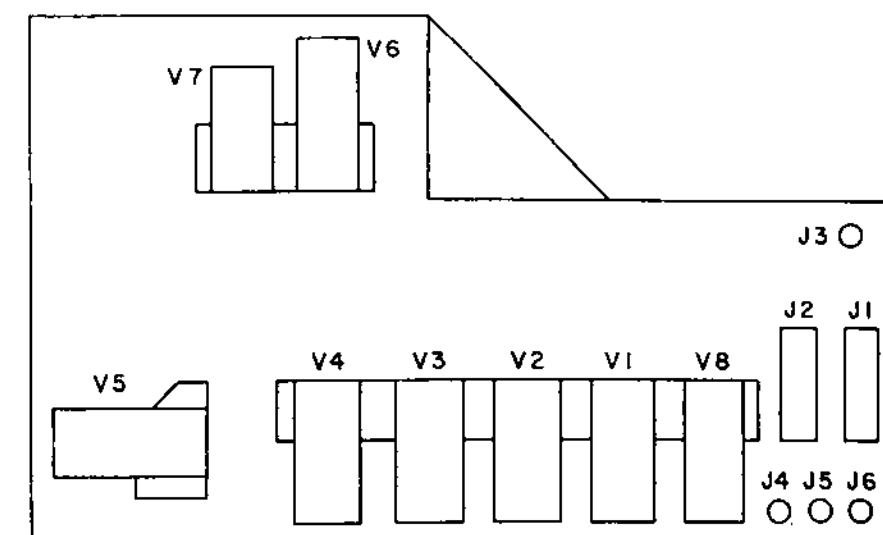
- Measurements are made with system energized through low voltage condition, and cables removed from J3, J4, J5, and J6.
- Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- Voltages are +dc measured to ground, unless otherwise indicated.

3. Resistance

- Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- Measurements are made with all external cables disconnected and connector J1 strapped as indicated.
- Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR J1



TOP VIEW OF CHASSIS

Ref design		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	12AT7WA	Pulse amplifier	1	64	82,000							2	—	0	3	0.5	180			
	V1B		Unblanking amplifier	6	225	15,000							7	-45	1.3 meg	8	—	0	4,5 to 9	6.3 ac	<1
XV2	V2A	12AT7WA	Bistable multivibrator	1	24	38,000							2	—	39,000Δ	3	—	0			
	V2B		Bistable multivibrator	6	117	42,000							7	-18	51,000	8	—	0	4,5 to 9	6.3 ac	<1
XV3	V3A	5814A	Monostable multivibrator	1	245	33,000Δ							2	-56	250,000	3	-10	82,000			
	V3B		Monostable multivibrator	6	20	82,000							7	-10	470,000	8	-10	82,000	4,5 to 9	6.3 ac	<1
XV4	V4A	12AT7WA	Start-stop oscillator	1	52	49,000							2	-0.5	220,000	3	—	0			
	V4B		Start-stop oscillator	6	250	0							7	—	68,000	8	3.8	19,000	4,5 to 9	6.3 ac	<1
XV5	V5A	12AT7WA	Squaring amplifier	1	91	47,000							2	3.8	58,000	3	4.2	1,200			
	V5B		Cathode follower	6	250	0							7	—	100,000	8	18	27,000	4,5 to 9	6.3 ac	<1

< Less than. Δ Reverse meter leads if reading is not obtained.

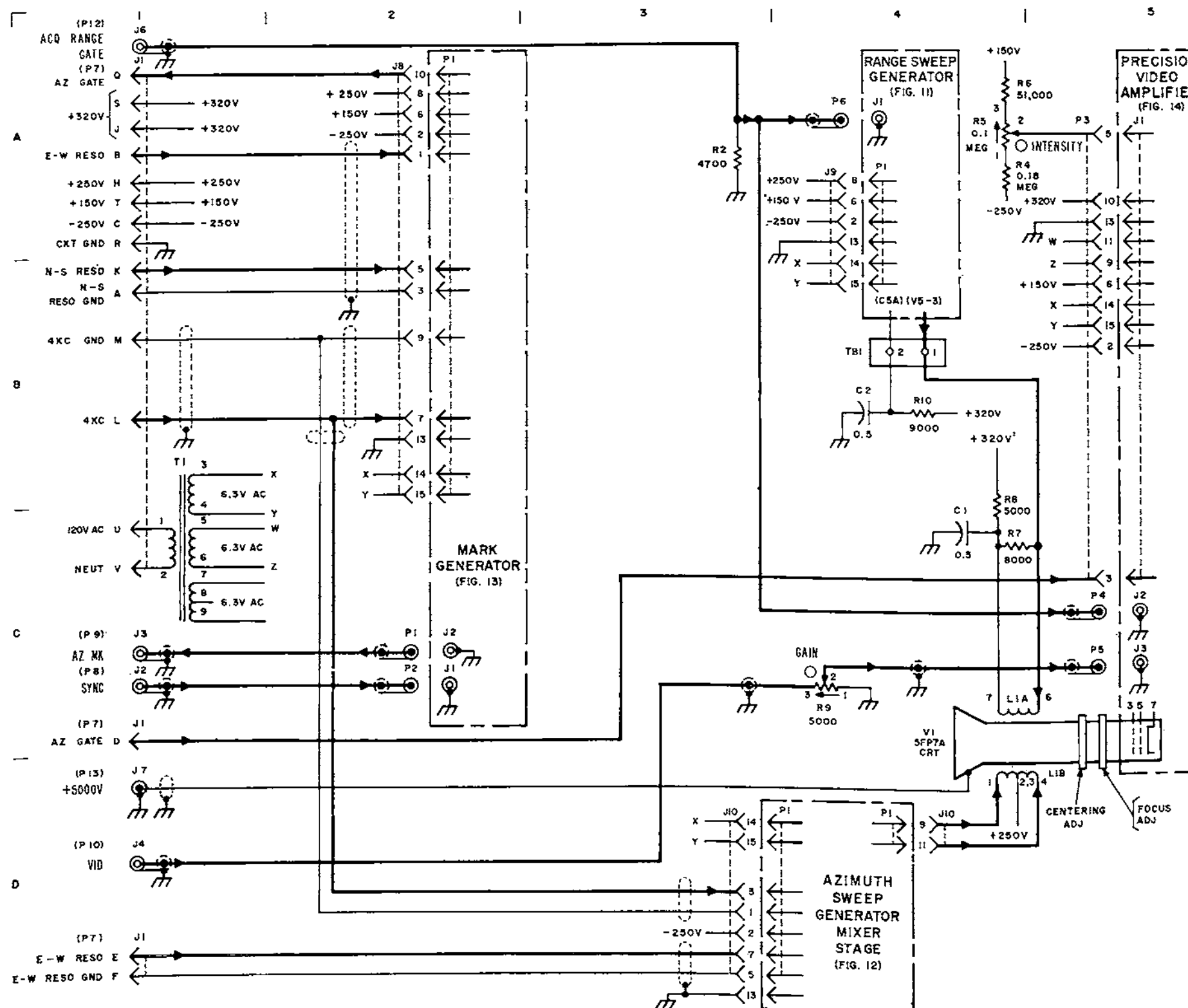
RA PD 417722

Figure 9A. (U) PPI marker generator 9007680 - voltage and resistance chart, sheet 1 of 2.



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C2



## NOTES:

1. ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
2. FOR ALL CONNECTIONS TO THIS ASSEMBLY SEE FIGURE 3
3. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
J1-6, N, P  
J8-4, 11, 12  
J9-1, 3, 4, 5, 7, 9, 10, 11, 12  
J10-4, 6, 8, 10, 12  
P3-1, 4, 7, 8, 12
4. FOR FUNCTIONAL REFERENCE, SEE FIGURES 21, 26, 27, 29, 31, TM9-1430-254-20

Figure 10. (U) Precision indicator 9007681—schematic diagram.

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Precision Indicator 9007681 - Apparatus List

Reference designation	Ordinance part No.	Part description
C1 -----	7685932	CAPACITOR, FIXED, PAPER DIELECTRIC: 1,000v dc, 0.5 $\mu$ f $\pm$ 10%, type CP67B1EG504K.
C2 -----	7647449	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.5 $\mu$ f $\pm$ 10%, type CP54B1EF504K.
J1 -----	7599082	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 20 male cont.
J2, J3, J4, J6 -----	7599662	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont.
J7 -----	8175024	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 male cont.
J8, J9, J10 -----	7599367	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 female cont.
L1 -----	7608139	COIL, TUBE DEFLECTION: electron tube
P1, P2, P4, P5, P6 -----	MS35170	CONNECTOR, PLUG, ELECTRICAL: stght, 1 male cont, type UG260B/U.
P3 -----	7605564	CONNECTOR, PLUG, ELECTRICAL: stght, 15 female cont.
R2 -----	MS35043-17	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4,700 ohm $\pm$ 10%, type RC20GF472K.
R4 -----	8023676	RESISTOR, FIXED, FILM: 1w, 0.18 meg $\pm$ 1%
R5 -----	7599440	RESISTOR, VARIABLE: composition; 2w, 0.1 meg $\pm$ 20%
R6 -----	MS35043-128	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 51,000 ohm $\pm$ 5%, type RC20GF513J.
R7 -----	7599641	RESISTOR, FIXED, WIRE WOUND: power type, 10w, 8,000 ohm $\pm$ 5%.
R8 -----	8237528	RESISTOR, FIXED, WIRE WOUND: power type, tubr, tab term., 60w, 5,000 ohm $\pm$ 5%, type RW36G502.
R9 -----	7599439	RESISTOR, VARIABLE: composition; 2w, 5,000 ohm $\pm$ 20%
R10 -----	7620160	RESISTOR, FIXED, WIRE WOUND: power type, tubr, tab term., 30w, 9,000 ohm $\pm$ 5%, type RW34G902.
T1 -----	7605345	TRANSFORMER, POWER, STEP-DOWN: sglt-ph; input 120v, 400 cps, 3 output wnd, 6.4v at 10 amp, 6.4v at 7 amp, 6.4v at 1.5 amp.
TB1 -----	7599512	TERMINAL BOARD: steatite, 2 screw term
V1 -----	7675508	ELECTRON TUBE: cathode ray, type 5FP7A MARK GENERATOR 9007682 (see fig. 13 for component parts). RANGE SWEEP GENERATOR 7617885 or 8607326 (see fig. 11 for component parts). PRECISION VIDEO AMPLIFIER 7620605 (see fig. 14 for component parts). AZIMUTH SWEEP GENERATOR MIXER STAGE 7620604 (see fig. 12 for component parts).

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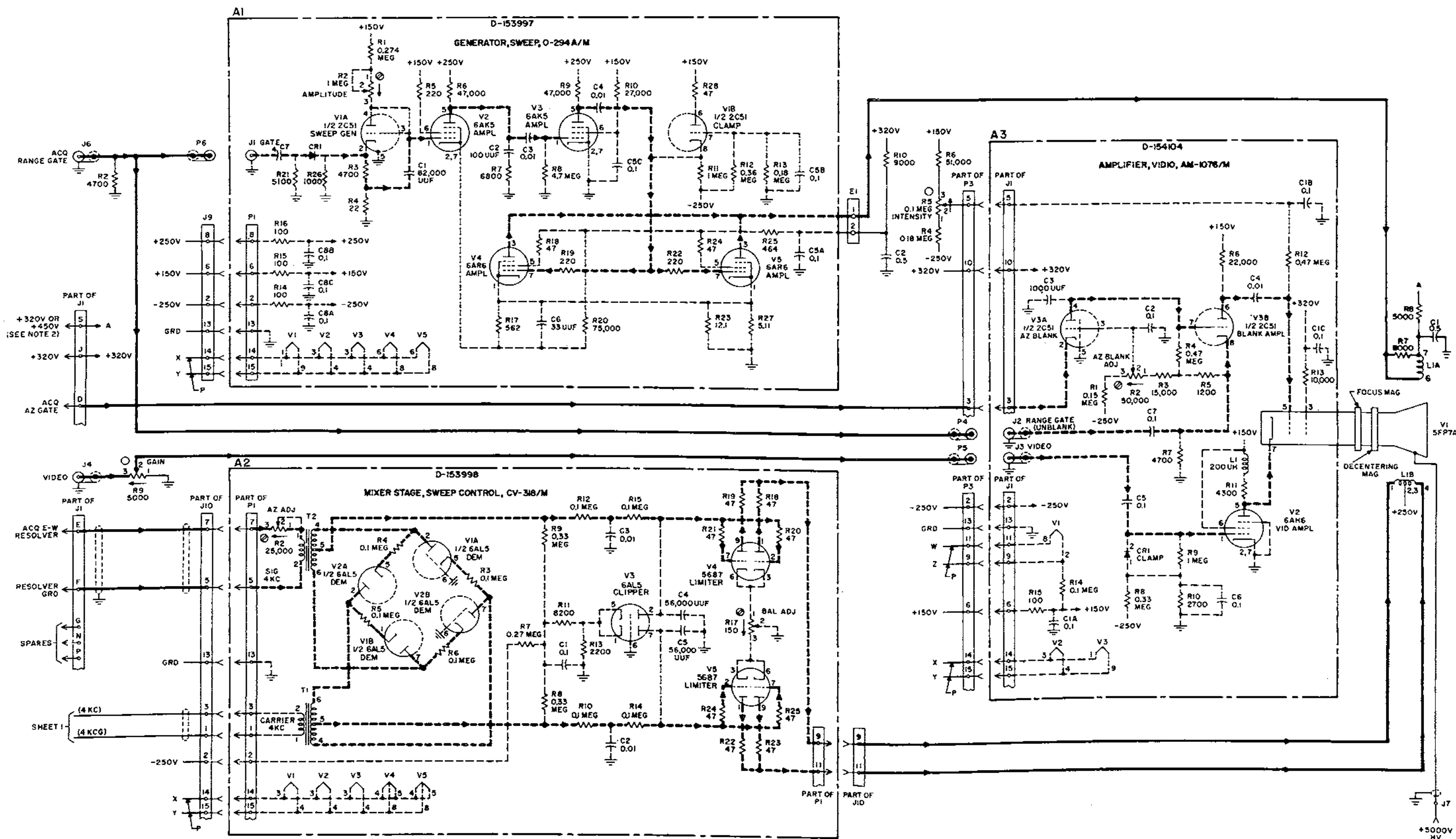
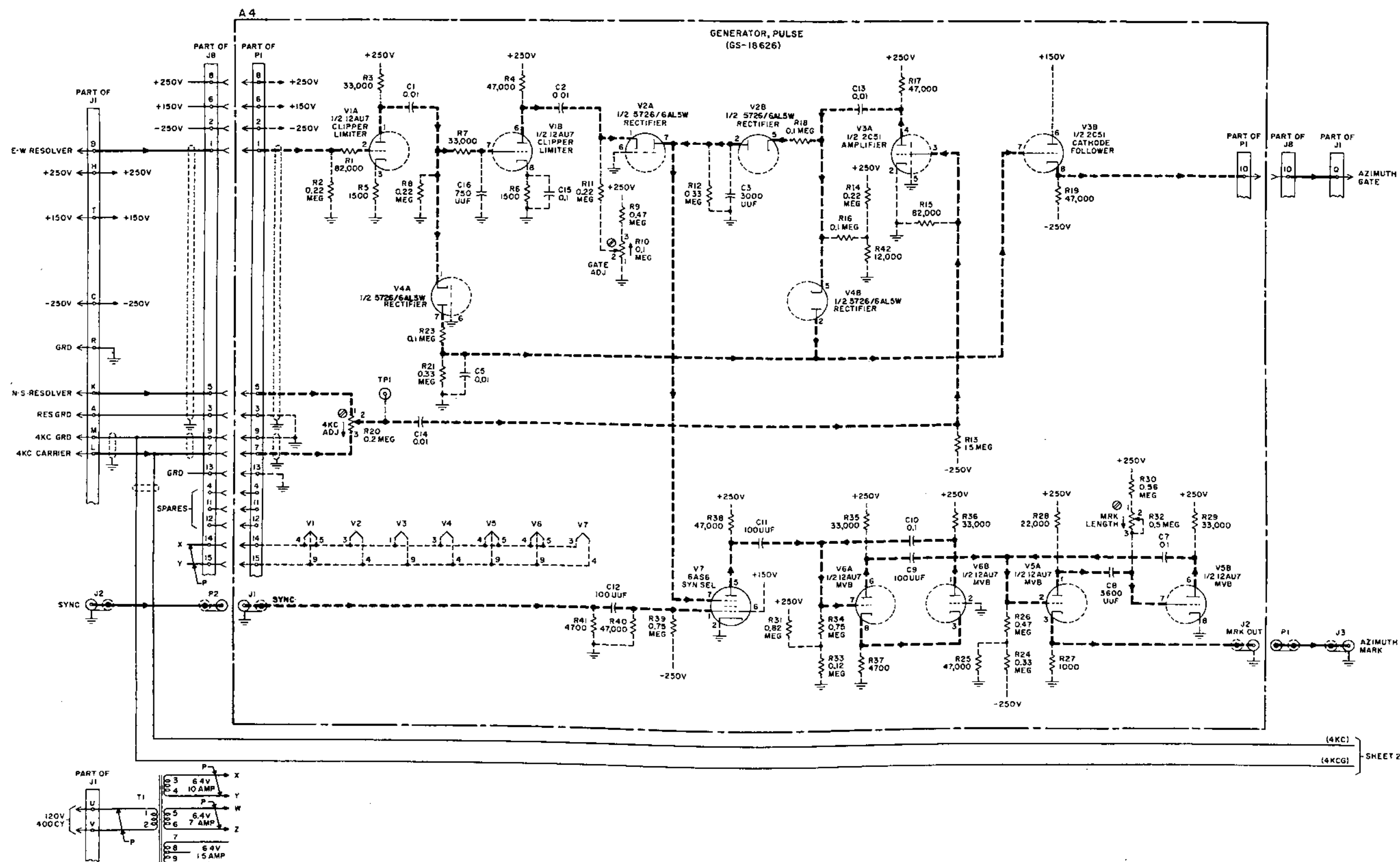


Figure 10.1 (U). Precision indicator 9985665—schematic diagram (sheet 1 of 3).

ORD G59377



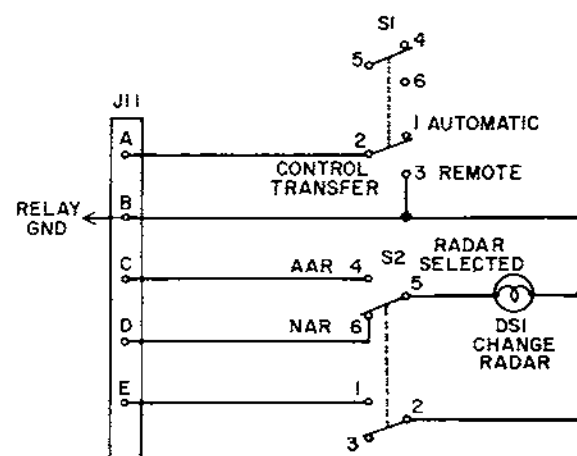
■ *Figure 10.1 (U). Continued (sheet 2 of 3).*

## (U) Precision Indicator 9985665—Apparatus List

Ref design	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol $\pm$ %	Watts	Volts		
A1					8607326	D153997
A2					7620604	D153998
A3					7620605	D154104
A4					9007682	GS-18626
C1	0.5	10		1000	CP67BIEG504K	
C2	0.5	10		600	7647449	
DS1					573440	
E1					7599512	
J1					9003897	
J2					7599662	
J3					7599662	
J4					7599662	
J6					7599662	
J7					8175024	
J8					7599367	
J9					7599367	
J10					7599367	
J11					9003583	
L1					7608139	
P1					9144418	
P2					9144418	
P3					7605564	
P4					MS35170-260C	
P5					MS35170-260C	
P6					MS35170-260C	
S1					9001495	
S2					9001495	
R2	4700	10	$\frac{1}{2}$		MS35043-17	
R4	0.18 meg	1	1		8023676	
R5	0.1 meg	20	2		7599440	
R6	51,000	5	$\frac{1}{2}$		MS35043-128	
R7	8000	5	10		7599641	
R8	5000	5	60		8237528	
R9	5000	20	2		7599439	
R10	9000	5	30		7620160	
T1					7605345	
V1					5FP7A	

## NOTES:

1. REFERENCE DESIGNATIONS ARE ARE ABBREVIATED. PREFIX THE DESIGNATION WITH THE UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH.
2. USE 320V FOR 8000 YARD SWEEP OR 450V FOR 5000 YARD SWEEP ON PIN "S" OF "J1".
3. UNLESS OTHERWISE SPECIFIED RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS.
4. ASSOCIATED JAN AND MIL SPECIFICATIONS ARE AS FOLLOWS:  
 CP TYPE CAPACITORS MIL-C-25  
 RC TYPE RESISTORS MIL-R-11  
 RW TYPE RESISTORS MIL-R-26  
 ELECTRON TUBES MIL-E-1
5. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
 J9-1,3,4,5,7,9,10,11,12  
 J10-4,6,8,10,12  
 P3-1,4,7,8,11,12



ORD 659376

Figure 10.1 (U). Continued (sheet 3 of 3).

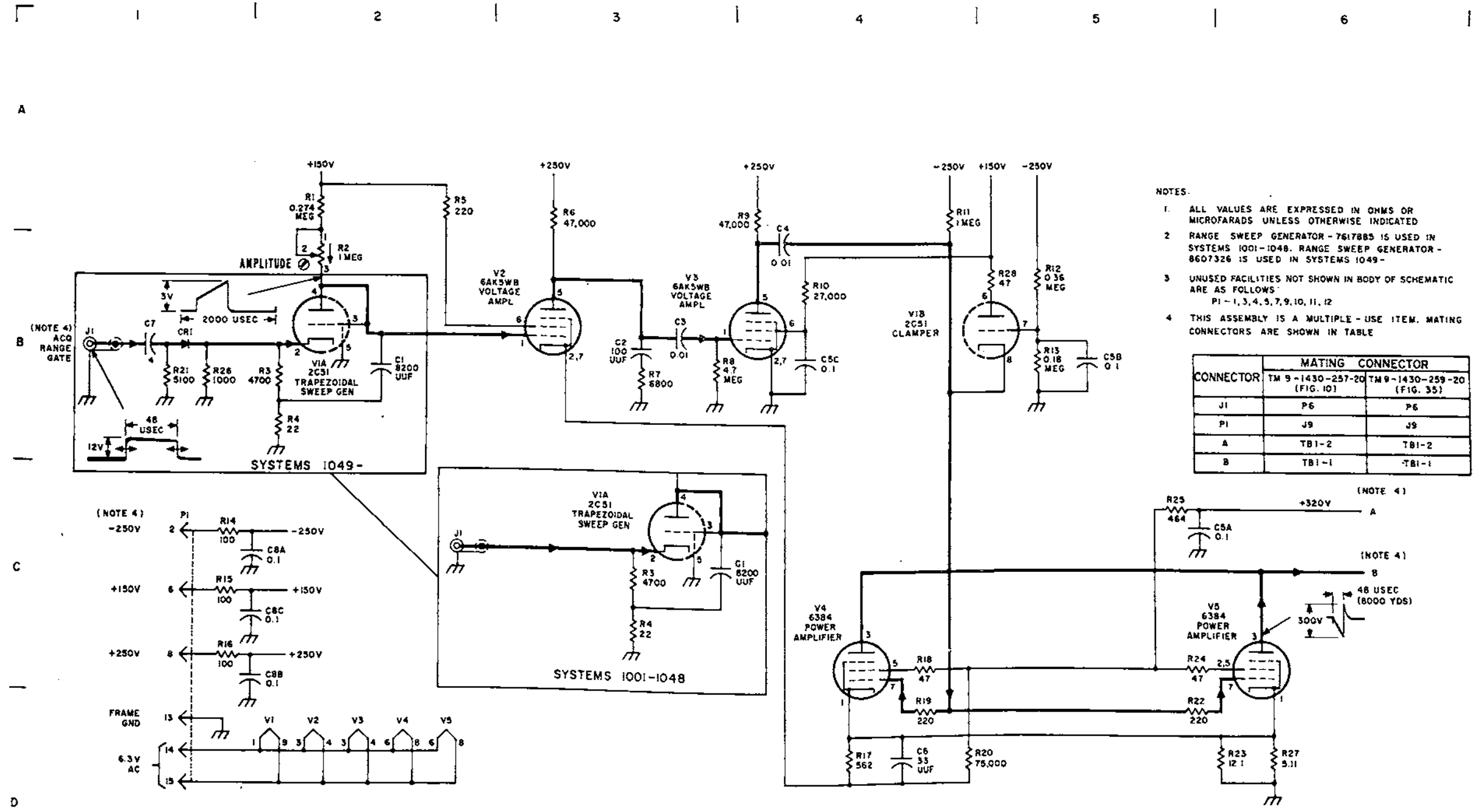


Figure 11. Range sweep generator 7617885 or 8607326—schematic diagram.

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## Range Sweep Generator 7617885 or 8607326—Apparatus List

Reference designation	Ordinance part No.	Part description
C1.....	7631676	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 8,200 $\mu$ f $\pm 5\%$ , type CM35B822J.
C2.....	522235	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 100 $\mu$ f $\pm 10\%$ , type CM20B101K.
C3.....	7631624	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f $\pm 20\%$ , type CM35B103M.
C4.....	7631617	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.01 $\mu$ f $\pm 20\%$ , type CN35A103M.
C5.....	7631698	CAPACITOR, FIXED, PAPER DIELECTRIC: 3 sec, 600v dc, 0.1-0.1-0.1 $\mu$ f $\pm 20\%$ , type CP69B5EF104M.
C6.....	522229	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 33 $\mu$ f $\pm 10\%$ , type CM20B330K.
C7.....	8023439	CAPACITOR, FIXED, ELECTROLYTIC: 60v dc, 4 $\mu$ f $\pm 20\%$ -15%.
C8.....	7631698	CAPACITOR, FIXED, PAPER DIELECTRIC: 3 sec, 600v dc, 0.1-0.1-0.1 $\mu$ f $\pm 20\%$ , type CP69B5EF104M.
CR1.....	7598937	SEMICONDUCTOR DEVICE, DIODE: rectifying, germanium; type 1N43.
J1.....	8531071	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG625B/U.
P1.....	7598051	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.
R1.....	7602678	RESISTOR, FIXED, FILM: 1w, 0.274 meg $\pm 2\%$
R2.....	7598943	RESISTOR, VARIABLE: composition; 2w, 1 meg $\pm 20\%$
R3.....	MS35043-17	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4,700 ohm $\pm 10\%$ , type RC20GF472K.
R4.....	MS35043-3	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 22 ohm $\pm 10\%$ , type RC20GF220K.
R5, R19, R22.....	MS35043-9	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 220 ohm $\pm 10\%$ , type RC20GF221K.

Reference designation	Ordinance part No.	Part description
R6, R9.....	MS35045-23	RESISTOR, FIXED, COMPOSITION: 2w, 47,000 ohm $\pm 10\%$ , type RC42GF473K.
R7.....	MS35043-18	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 6,800 ohm $\pm 10\%$ , type RC20GF682K.
R8.....	MS35043-35	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4.7 meg $\pm 10\%$ , type RC20GF475K.
R10.....	MS35043-212	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 27,000 ohm $\pm 10\%$ , type RC20GF273K.
R11.....	MS35043-31	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1 meg $\pm 10\%$ , type RC20GF105K.
R12.....	MS35043-148	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.36 meg $\pm 5\%$ , type RC20GF364J.
R13.....	MS35043-141	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.18 meg $\pm 5\%$ , type RC20GF184J.
R14, R15, R16.....	MS35043-7	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 100 ohm $\pm 10\%$ , type RC20GF101K.
R17.....	7610274	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 562 ohm $\pm 1\%$
R18, R24, R28.....	MS35043-5	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 47 ohm $\pm 10\%$ , type RC20GF470K.
R20.....	7622565	RESISTOR, FIXED, FILM: 2w, 75,000 ohm $\pm 1\%$
R21.....	MS35043-104	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 5,100 ohm $\pm 5\%$ , type RC20GF512J.
R23.....	7622563	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 12.1 ohm $\pm 1\%$
R25.....	7622564	RESISTOR, FIXED, FILM: 2w, 464 ohm $\pm 1\%$
R26.....	MS35043-87	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1,000 ohm $\pm 5\%$ , type RC20GF102J.
R27.....	7622561	RESISTOR, FIXED, FILM: $\frac{1}{2}$ w, 5.11 ohm $\pm 1\%$
V1.....	7599316	ELECTRON TUBE: type 2C51
V2, V3.....	7621066	ELECTRON TUBE: type 6AK5WB
V4, V5.....	8626879	ELECTRON TUBE: type 6384

1 System 1040.

Figure 11. Range sweep generator 7617885 or 8607326—schematic diagram.—Continued

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Authorized

# MEASUREMENT NOTES

## 1. General

Warning: Serious injury may result from flying glass fragments if cathode-ray tube is broken. Use extreme care and wear protective mask and gloves when handling cathode-ray tube.

- Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- Notation 1 to 9 in the Pin column indicates that measurement is made between pins 1 and 9.
- All values given are typical.

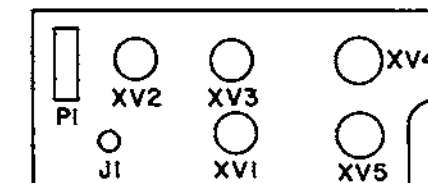
## 2. Voltage

- Measurements are made with system energized through low voltage condition, and with cable removed from J1.
- Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.

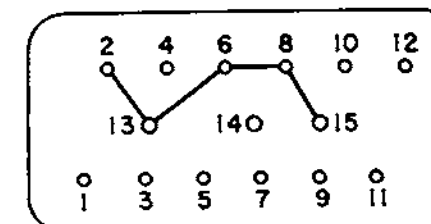
c. Voltages are +dc measured to ground, unless other wise indicated.

## 3. Resistance

- Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- Measurements are made with all external cables disconnected and connector P1 strapped as indicated.
- Resistances are measured to ground unless otherwise indicated.
- A dash in the Ohms column indicates a resistance in excess of 10 megohms.



BOTTOM VIEW OF CHASSIS



PIN STRAPPING ARRANGEMENT FOR P1

Ref desig		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	2C51	Trapezoidal sweep generator	4	1.7	500,000							3	1.7	500,000	2	1.1	4,700	1 to 9	6.3 ac	<1
	V1B		Clamper	6	147	47							7	-82	120,000	8	-76	1 meg			
XV2	V2	6AK5WB	Voltage amplifier	5	75	47,000	Same as cathode			8	75	320	1	1.7	285,000	2,7	4.8	579	3 to 4	6.3 ac	<1
XV3	V3	6AK5WB	Voltage amplifier	5	21	47,000	Same as cathode			6	75	27,000	1	-0.5	4.7 meg	2,7	0	0	3 to 4	6.3 ac	<1
XV4	V4	6384	Power amplifier	3	315	—	Same as cathode			5	283	76,000	7	-76	1 meg	1	0	3.6	6 to 8	6.3 ac	<1
XV5	V5	6384	Power amplifier	3	315	—	Same as cathode			5	283	76,000	7	-76	1 meg	1	0	3.6	6 to 8	6.3 ac	<1

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Figure 11A. Range sweep generator 7617885 or 8607826—voltage and resistance chart.

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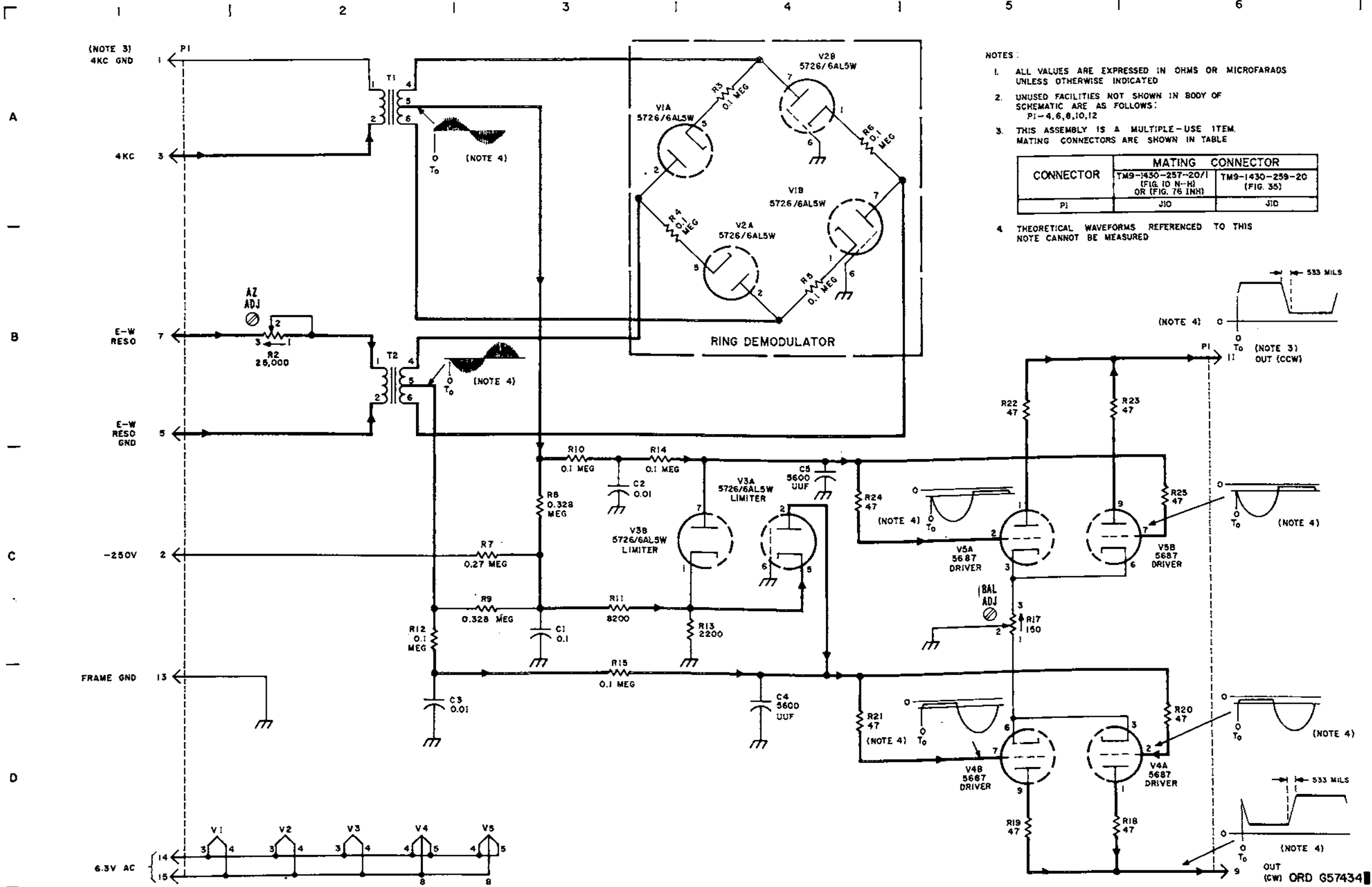


Figure 12 (U). Azimuth sweep generator mixer stage 7620604—schematic diagram.



*Azimuth Sweep Generator Mixer Stage 7620604—Apparatus List*

Reference designation	Ordinance part No.	Part description
C1 .....	7599325	CAPACITOR, FIXED, PAPER, DIELECTRIC: 300v dc, 0.1 $\mu f$ $\pm 20\%$ .
C2, C3 .....	522119	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu f$ $\pm 10\%$ , type CM35B103K
C4, C5 .....	522116	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 5600 $\mu f$ $\pm 10\%$ , type CM35B562K
P1 .....	7598051	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.
R2 .....	7599606	RESISTOR, VARIABLE: composition; 2w, 25,000 ohm $\pm 10\%$ .
R3, R4, R5, R6 .....	7602739	RESISTOR, FIXED FILM: 1w, 0.1 meg $\pm 1\%$ .
R7 .....	MS35044-159	RESISTOR, FIXED, COMPOSITION: 1w, 0.27 meg $\pm 5\%$ , type RC32GF274J
R8, R9 .....	7602797	RESISTOR, FIXED, FILM: 1w, 0.328 meg $\pm 2\%$
R10, R12, R14, R15 .....	MS35043-25	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm 10\%$ type RC20GF104K
R11 .....	MS35043-109	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 8,200 ohm, $\pm 5\%$ , type RC20GF822J
R13 .....	MS35043-95	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2,200 ohm $\pm 5\%$ type RC20GF222J
R17 .....	7599637	RESISTOR, VARIABLE: composition; 2w, 150 ohm $\pm 10\%$
R18, R19, R20, R21, R22, R23, R24, R25.	MS35043-5	REGISTER, FIXED, COMPOSITION: $\frac{1}{2}$ w, 47 ohm $\pm 10\%$ type RC20GF470K
T1, T2 .....	7605338	TRANSFORMER, AUDIO FREQUENCY: input; 827 ohm input, 3,050 ohm output
V1, V2, V3 .....	8298923	ELECTRON TUBE: type 5726/6AL5W
V4, V5 .....	7599315	ELECTRON TUBE: type 5687

MEASUREMENT NOTES

1. General

Warning: Serious injury may result from flying glass fragments if cathode-ray tube is broken. Use extreme care and wear protective mask and gloves when handling cathode-ray tube.

- a. Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- b. Notation 3 to 4 in the Pin column indicates that measurement is made between pins 3 and 4; notation 4, 5 to 8 indicates that measurement is made between pin 4 and pin 8 or pin 5 and pin 8.
- c. All values given are typical.

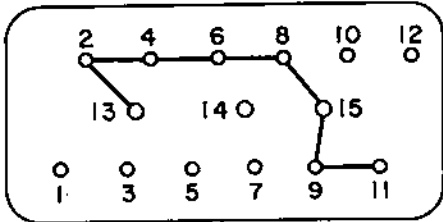
2. Voltage

Warning: High voltages used in this equipment may cause death on contact.

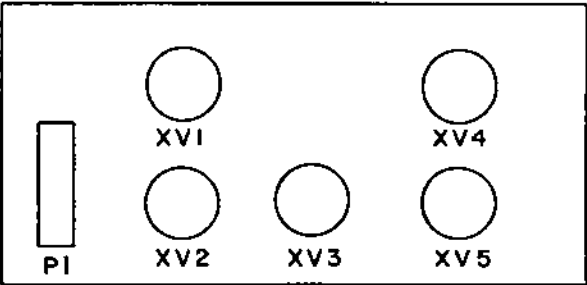
- a. Measurements are made with system energized through low voltage condition, and with 4-kc oscillator removed from target designate control-indicator.
- b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- c. Voltages are +dc measured to ground, unless otherwise indicated.

3. Resistance

- a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- b. Measurements are made with all external cables disconnected and connector P1 strapped as indicated.
- c. Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR P1



BOTTOM VIEW OF CHASSIS

Ref design		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	5726/ 6AL5W	Demodulator	2	-8.8	338,000										5	-8.6	438,000	3 to 4	6.3 ac	<1
	V1B			7	-8.8	338,000										1	-8.6	438,000			
XV2	V2A	5726/ 6AL5W	Demodulator	2	-8.8	338,000										5	-8.6	438,000	3 to 4	6.3 ac	<1
	V2B			7	-8.8	338,000										1	-8.6	438,000			
XV3	V3A	5726/ 6AL5W	Limiter	2	-8.8	538,000										5	-1.9	2,180	3 to 4	6.3 ac	<1
	V3B			7	-8.8	538,000										1	-1.9	2,180			
XV4	V4A	5687	Driver	1	206	47							2	-8.8	538,000	3	1.5	90	4, 5 to 8	6.3 ac	<1
	V4B			9	206	47							7	-8.8	538,000	6	1.5	90			
XV5	V5A	5687	Driver	1	206	47							2	-8.8	538,000	3	1.5	90	4, 5 to 8	6.3 ac	<1
	V5B			9	206	47							7	-8.8	538,000	6	1.5	90			

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Figure 12A. (U) Azimuth sweep generator mixer stage 7620604 - voltage and resistance chart.

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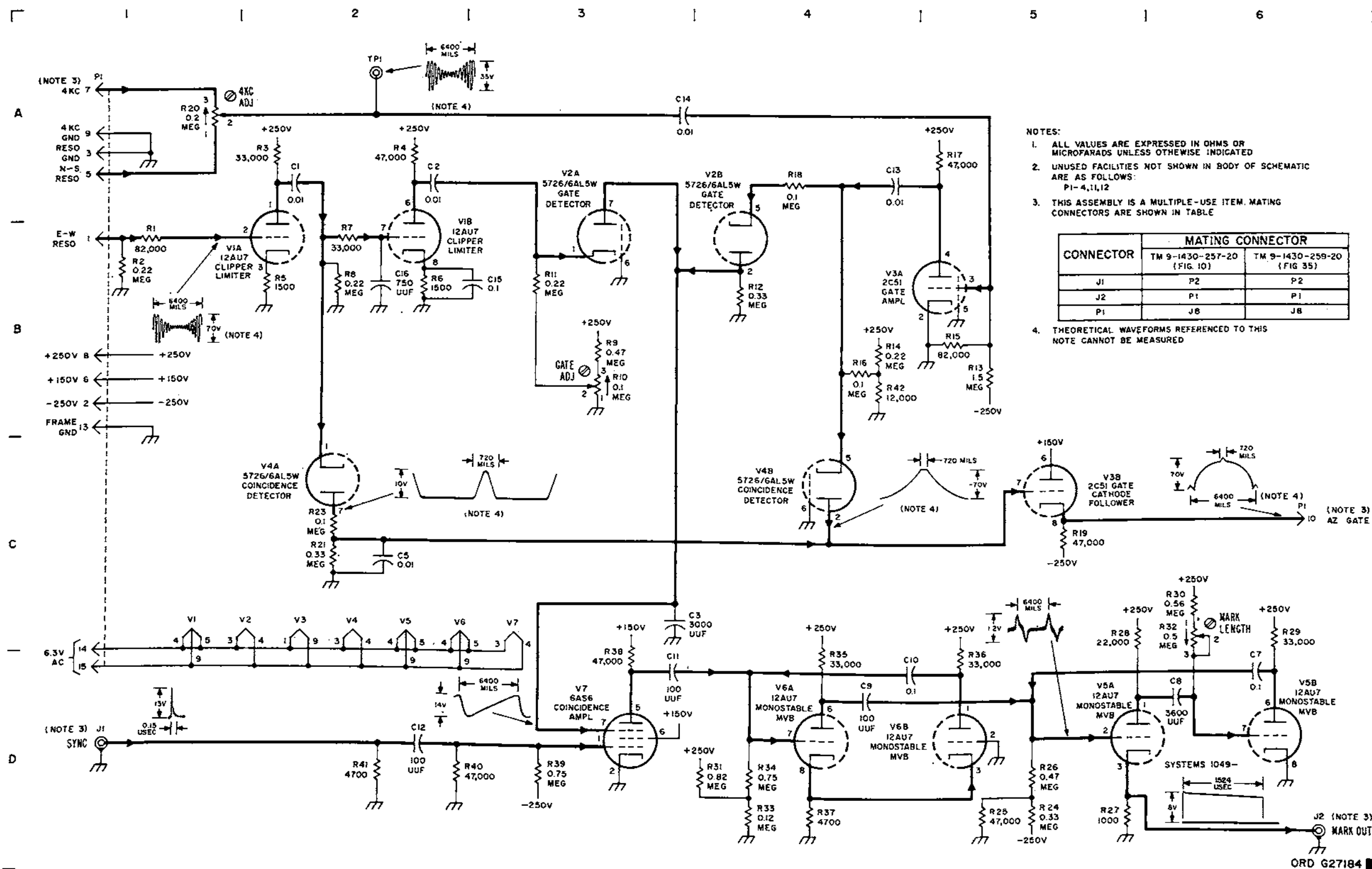


Figure 13. (U) Mark generator 9007682—schematic diagram.

Mark Generator 9007682 - Apparatus List

Reference designation	Ordinance part No.	Part description	Reference designation	Ordinance part No.	Part description
C1, C2, C5, C13, C14-----	8243066	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f $\pm$ 10%, type CM35C103K.	R16 -----	MS35043-135	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm$ 5%, type RC20GF104J.
C3 -----	521065	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 3,000 $\mu$ f $\pm$ 5%, type CM30B302J.	R18, R23 -----	MS35043-25	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm$ 10%, type RC20GF1041K.
C7, C10-----	7646033	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.1 $\mu$ f $\pm$ 10%, type CP54B1EF104K.	R19 -----	MS35045-23	RESISTOR, FIXED, COMPOSITION: 2w, 47,000 ohm $\pm$ 10%, type RC42GF473K.
C8 -----	8519842	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 3,600 $\mu$ f $\pm$ 5%, type CM35B362J.	R20 -----	7599399	RESISTOR, VARIABLE: composition; 2w, 0.2 meg $\pm$ 10%
C9, C11, C12 -----	522235	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 100 $\mu$ f $\pm$ 10%, type CM20B101K.	R24 -----	MS35043-147	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.33 meg $\pm$ 5%, type RC20GF334J.
C15 -----	8023769	CAPACITOR, FIXED, PAPER DIELECTRIC: 200v dc, 0.1 $\mu$ f $\pm$ 20%.	R25 -----	MS35043-127	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 47,000 ohm $\pm$ 5%, type RC20GF473J.
C16 -----	522219	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 750 $\mu$ f $\pm$ 5%, type CM25B751J.	R26 -----	MS35043-151	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.47 meg $\pm$ 5%, type RC20GF474J.
J1, J2 -----	8531071	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG625B/U.	R27 -----	MS35043-13	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1,000 ohm $\pm$ 10%, type RC20GF102K.
P1 -----	7598934	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.	R28 -----	MS35045-21	RESISTOR, FIXED, COMPOSITION: 2w, 22,000 ohm $\pm$ 10%, type RC42GF223K.
R1 -----	MS35043-215	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 82,000 ohm $\pm$ 10%, type RC20GF823K.	R30 -----	MS35043-220	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.56 meg $\pm$ 10%, type RC20GF564K.
R2, R8, R11 -----	MS35043-27	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.22 meg $\pm$ 10%, type RC20GF224K.	R31 -----	MS35043-221	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.82 meg $\pm$ 10%, type RC20GF824K.
R3, R29, R35, R36 -----	MS35045-22	RESISTOR, FIXED, COMPOSITION: 2w, 33,000 ohm $\pm$ 10%, type RC42GF333K.	R32 -----	7599324	RESISTOR, VARIABLE: composition; 2w, 0.5 meg $\pm$ 10%
R4, R17, R38 -----	MS35045-23	RESISTOR, FIXED, COMPOSITION: 2w, 47,000 ohm $\pm$ 10%, type RC42GF473K.	R33 -----	MS35043-137	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.12 meg $\pm$ 5%, type RC20GF124J.
R5, R6-----	MS35043-14	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1,500 ohm $\pm$ 10%, type RC20GF152K.	R34 -----	MS35043-156	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.75 meg $\pm$ 5%, type RC20GF754J.
R7 -----	MS35043-22	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 33,000 ohm $\pm$ 10%, type RC20GF333K.	R37 -----	MS35043-108	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4,700 ohm $\pm$ 5%, type RC20GF472J.
R9 -----	MS35043-29	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.47 meg $\pm$ 10%, type RC20GF474K.	R39 -----	MS35043-156	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.75 meg $\pm$ 5%, type RC20GF754J.
R10 -----	7599072	RESISTOR, VARIABLE: composition; 2w, 0.1 meg $\pm$ 10%	R40 -----	MS35043-127	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 47,000 ohm $\pm$ 5%, type RC20GF473J.
R12, R21 -----	MS35043-28	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.33 meg $\pm$ 10%, type RC20GF334K.	R41 -----	MS35043-17	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4,700 ohm $\pm$ 10%, type RC20GF472K.
R13 -----	MS35043-163	RESISTOR FIXED, COMPOSITION: $\frac{1}{2}$ w, 1.5 meg $\pm$ 5%, type RC20GF155J.	R42 -----	MS35043-113	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 12,000 ohm $\pm$ 5%, type RC20GF123J.
R14 -----	MS35043-143	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.22 meg $\pm$ 5%, type RC20GF224J.	TP1 -----	7598949	TERMINAL, STUD
R15 -----	MS35043-133	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 82,000 ohm $\pm$ 5%, type RC20GF823J.	V1, V5, V6 -----	7599317	ELECTRON TUBE: type 12AU7
			V2, V4 -----	8298923	ELECTRON TUBE: type 5726/6AL5W
			V3 -----	7599316	ELECTRON TUBE: type 2C51
			V7 -----	7599309	ELECTRON TUBE: type 6AS6

Figure 13. (U) Mark generator 9007682—schematic diagram—Continued

MEASUREMENT NOTES

1. General
- a. Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.

b. Notation 3 to 4 in the Pin column indicates that measurement is made between pins 3 and 4; notation 4, 5 to 9 indicates that measurement is made between pin 4 and pin 9 or pin 5 and pin 9.

c. All values given are typical.
2. Voltage
- a. Measurements are made with system energized through low voltage condition, and with cables removed from J1 and J2.

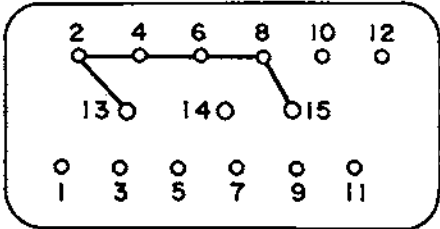
b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.

c. Voltages are +dc measured to ground, unless otherwise indicated.

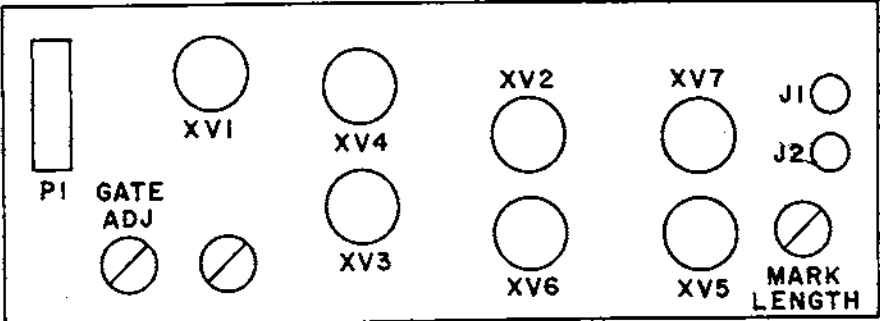
3. Resistance
- a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.

b. Measurements are made with all external cables disconnected and connector P1 strapped as indicated.

c. Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR P1



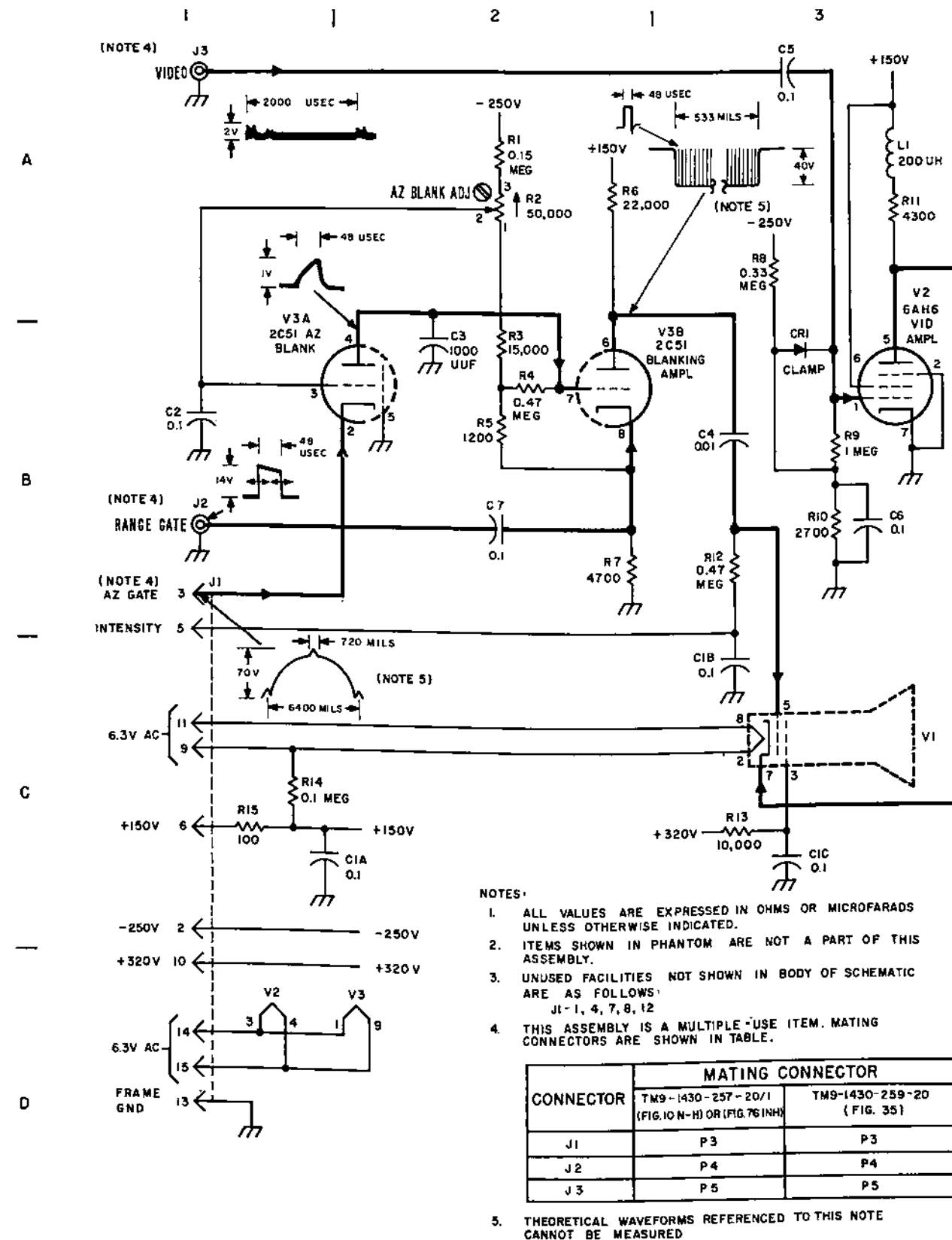
BOTTOM VIEW OF CHASSIS

Ref desig		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	12AU7	Clipper limiter	1	142	33,000							2	0	302,000	3	5.5	1,500	4, 5 to 9	6.3 ac	<1
	V1B			6	120	47,000							7	0	260,000	8	4.5	1,500			
XV2	V2A	5726/ 6AL5W	Gate detector	7	-27	330,000										1	44	300,000	3 to 4	6.3 ac	<1
	V2B			2	-27	330,000										5	54	210,000			
XV3	V3A	2C51	Gate amplifier	4	170	47,000							3	-16	78,000	2	0	0	1 to 9	6.3 ac	<1
	V3B		Gate cathode follower	6	150	0							7	-65	330,000	8	-62	47,000			
XV4	V4A	5726/ 6AL5W	Coincidence detector	7	-65	430,000										1	0	220,000	3 to 4	6.3 ac	<1
	V4B			2	-65	330,000										5	46	110,000			
XV5	V5A	12AU7	Monostable multivibrator	1	250	22,000							2	-28	510,000	3	0	1,000	4, 5 to 9	6.3 ac	<1
	V5B			6	44	33,000							7	0.65	750,000	8	0	0			
XV6	V6A	12AU7	Monostable multivibrator	6	78	33,000							7	26	855,000	8	26	4,700	4, 5 to 9	6.3 ac	<1
	V6B			1	250	33,000							2	0	0	3	26	4,700			
XV7	V7	6AS6	Coincidence amplifier	5	150	47,000	7	-27	330,000	6		0	1	-14.5	44,000	2	0	0	3 to 4	6.3 ac	<1

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Figure 13A. (U) Mark generator 9007682—voltage and resistance chart.



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Figure 14 (U). Precision video amplifier 7620605—schematic diagram.

Precision Video Amplifier 7620605—Apparatus List

Reference designation	Ordinance part No.	Part description
C1 .....	7631698	CAPACITOR, FIXED, PAPER DIELECTRIC: 3 sec, 600v dc, 0.1-0.1-0.1 $\mu$ f $\pm$ 20%, type CP69B5EF104M.
C2, C5, C6, C7 .....	7599325	CAPACITOR, FIXED, PAPER DIELECTRIC: 200v dc, 0.1 $\mu$ f $\pm$ 20%.
C3 .....	521018	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 1,000 $\mu$ f $\pm$ 10%, type CM30B102K.
C4 .....	522119	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f + 10%, type CM35B103K.
CR1 <sup>1</sup> .....	7598937	SEMICONDUCTOR DEVICE, DIODE: rectifying, germanium; type 1N43
CR1 <sup>2</sup> .....	8177408	SEMICONDUCTOR DEVICE, DIODE: rectifying, germanium; type 1N198
J1 .....	7599834	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont
J2, J3 .....	8531071	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG625B/U
L1 .....	7598933	COIL, RADIO FREQUENCY: 200 $\mu$ h $\pm$ 5% at 564 kc, 4.4 ohm dc, unshielded
R1 .....	MS35043-139	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.15 meg $\pm$ 5%, type RC20GF154J
R2 .....	7598942	RESISTOR, VARIABLE: composition; 2w, 50,000 ohm $\pm$ 10%
R3 .....	MS35043-115	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 15,000 ohm $\pm$ 5%, type RC20GF153J
R4, R12 .....	MS35043-29	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.47 meg $\pm$ 10%, type RC20GF474K
R5 .....	MS35043-89	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1,200 ohm $\pm$ 5%, type RC20GF122J
R6 .....	MS35044-21	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 22,000 ohm $\pm$ 10%, type RC32GF223K
R7 .....	MS35043-17	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4,700 ohm $\pm$ 10%, type RC20GF472K
R8 .....	MS35043-147	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.33 meg $\pm$ 5%, type RC20GF334J
R9 .....	MS35043-31	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1 meg $\pm$ 10%, type RC20GF105K
R10 .....	MS35043-97	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2,700 ohm $\pm$ 5%, type RC20GF272J
R11 .....	MS35045-102	RESISTOR, FIXED, COMPOSITION: 2w, 4,300 ohm $\pm$ 5%, type RC42GF432J
R13 .....	MS35043-19	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 10,000 ohm $\pm$ 10%, type RC20GF103K
R14 .....	MS35043-25	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm$ 10%, type RC20GF104K
R15 .....	MS35043-7	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 100 ohm $\pm$ 10%, type RC20GF101K
V2 .....	7599312	ELECTRON TUBE: type 6AH6
V8 .....	7599316	ELECTRON TUBE: type 2C51

<sup>1</sup>Systems 1001-1218

<sup>2</sup>Systems 1219-

Precision Video Amplifier 7620605—Apparatus List

Reference designation	Ordinance part No.	Part description
C1 .....	7631698	CAPACITOR, FIXED, PAPER DIELECTRIC: 3 sec, 600v dc, 0.1-0.1-0.1 $\mu$ f $\pm$ 20%, type CP69B5EF104M.
C2, C5, C6, C7 .....	7599325	CAPACITOR, FIXED, PAPER DIELECTRIC: 200v dc, 0.1 $\mu$ f $\pm$ 20%.
C3 .....	521018	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 1,000 $\mu$ f $\pm$ 10%, type CM30B102K.
C4 .....	522119	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f + 10%, type CM35B103K.
CR1 <sup>1</sup> .....	7598937	SEMICONDUCTOR DEVICE, DIODE: rectifying, germanium; type 1N43
CR1 <sup>2</sup> .....	8177408	SEMICONDUCTOR DEVICE, DIODE: rectifying, germanium; type 1N198
J1 .....	7599834	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont
J2, J3 .....	8531071	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG625B/U
L1 .....	7598933	COIL, RADIO FREQUENCY: 200 $\mu$ h $\pm$ 5% at 564 kc, 4.4 ohm dc, unshielded
R1 .....	MS35043-139	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.15 meg $\pm$ 5%, type RC20GF154J
R2 .....	7598942	RESISTOR, VARIABLE: composition; 2w, 50,000 ohm $\pm$ 10%
R3 .....	MS35043-115	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 15,000 ohm $\pm$ 5%, type RC20GF153J
R4, R12 .....	MS35043-29	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.47 meg $\pm$ 10%, type RC20GF474K
R5 .....	MS35043-89	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1,200 ohm $\pm$ 5%, type RC20GF122J
R6 .....	MS35044-21	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 22,000 ohm $\pm$ 10%, type RC32GF223K
R7 .....	MS35043-17	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4,700 ohm $\pm$ 10%, type RC20GF472K
R8 .....	MS35043-147	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.83 meg $\pm$ 5%, type RC20GF334J
R9 .....	MS35043-31	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1 meg $\pm$ 10%, type RC20GF105K
R10 .....	MS35043-97	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2,700 ohm $\pm$ 5%, type RC20GF272J
R11 .....	MS35045-102	RESISTOR, FIXED, COMPOSITION: 2w, 4,300 ohm $\pm$ 5%, type RC42GF432J
R13 .....	MS35043-19	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 10,000 ohm $\pm$ 10%, type RC20GF103K
R14 .....	MS35043-25	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm$ 10%, type RC20GF104K
R15 .....	MS35043-7	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 100 ohm $\pm$ 10%, type RC20GF101K
V2 .....	7599312	ELECTRON TUBE: type 6AH6
V3 .....	7599316	ELECTRON TUBE: type 2C51

<sup>1</sup>Systems 1001-1218

<sup>2</sup>Systems 1219-



### MEASUREMENT NOTES

## 1. General

Warning: Serious injury may result from flying glass fragments if cathode-ray tube is broken. Use extreme care and wear protective mask and gloves when handling cathode-ray tube.

- a. Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- b. Notation 2, 8 in the Pin column indicates that measurement is made between pin 2 and ground or pin 8 and ground; notation 2 to 8 indicates that measurement is made between pins 2 and 8.
- c. All values given are typical.

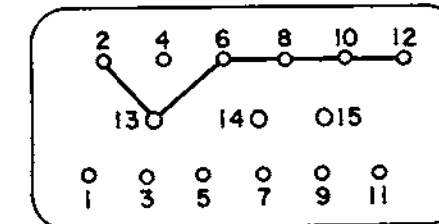
## 2. Voltage

**Warning: High voltage used in this equipment may cause death on contact.**

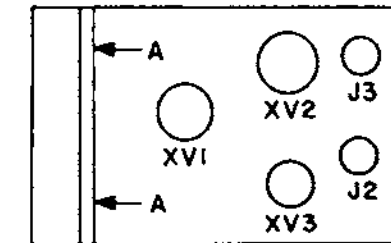
- a. Measurements are made with system energized through low voltage condition, and with cables removed from J2 and J3.
- b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- c. Voltages are +dc measured to ground, unless otherwise indicated.

### 3. Resistance

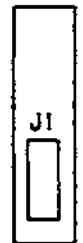
- a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- b. Measurements are made with all external cables disconnected and connector J1 strapped as indicated.
- c. Resistances are measured to ground unless otherwise indicated.
- d. A dash in the Ohms column indicates a resistance in excess of 10 megohms.



### PIN STRAPPING ARRANGEMENT FOR J1



**BOTTOM VIEW OF CHASSIS**



**VIEW A-A**

[illegible]

< Less than.    Δ Reverse meter leads if reading is not obtained.    \* Part of precision indicator - 8173218.

RA PD 417727

Figure 14A. (U) Precision video amplifier 7620605—voltage and resistance chart.

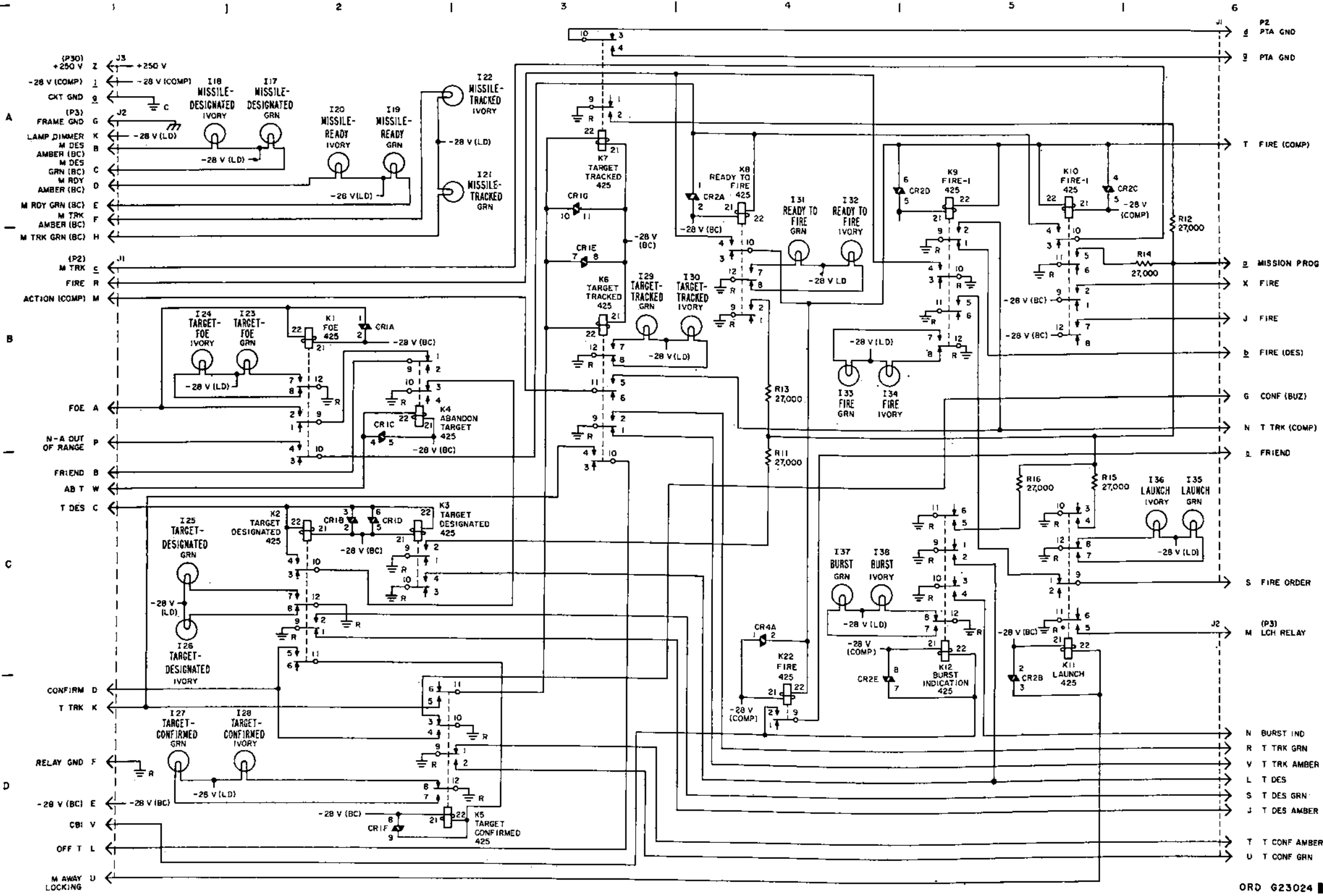


Figure 15. (CMHA) Battery signal panel-indicator 9155164 - schematic diagram, sheet 1 of 4.

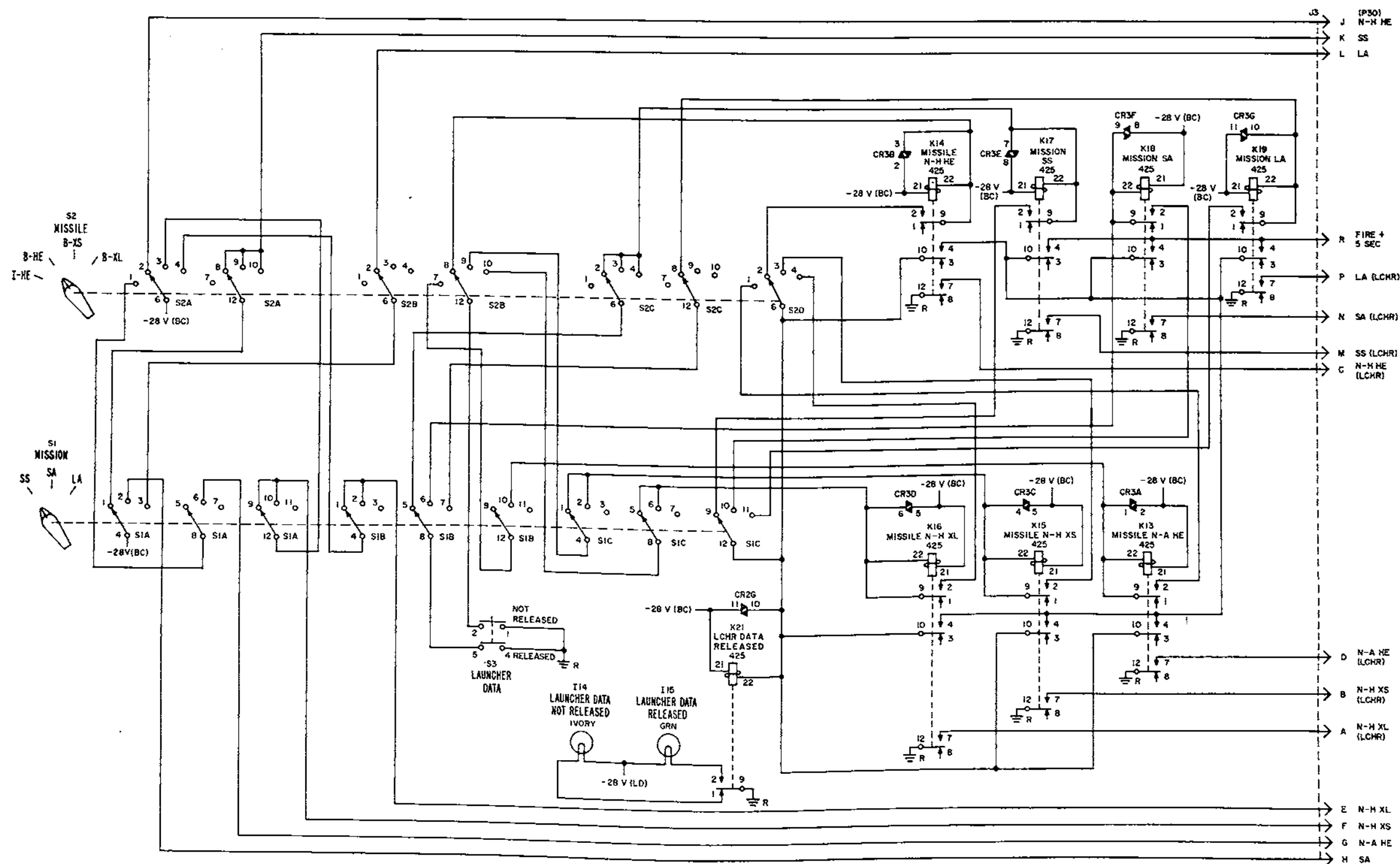
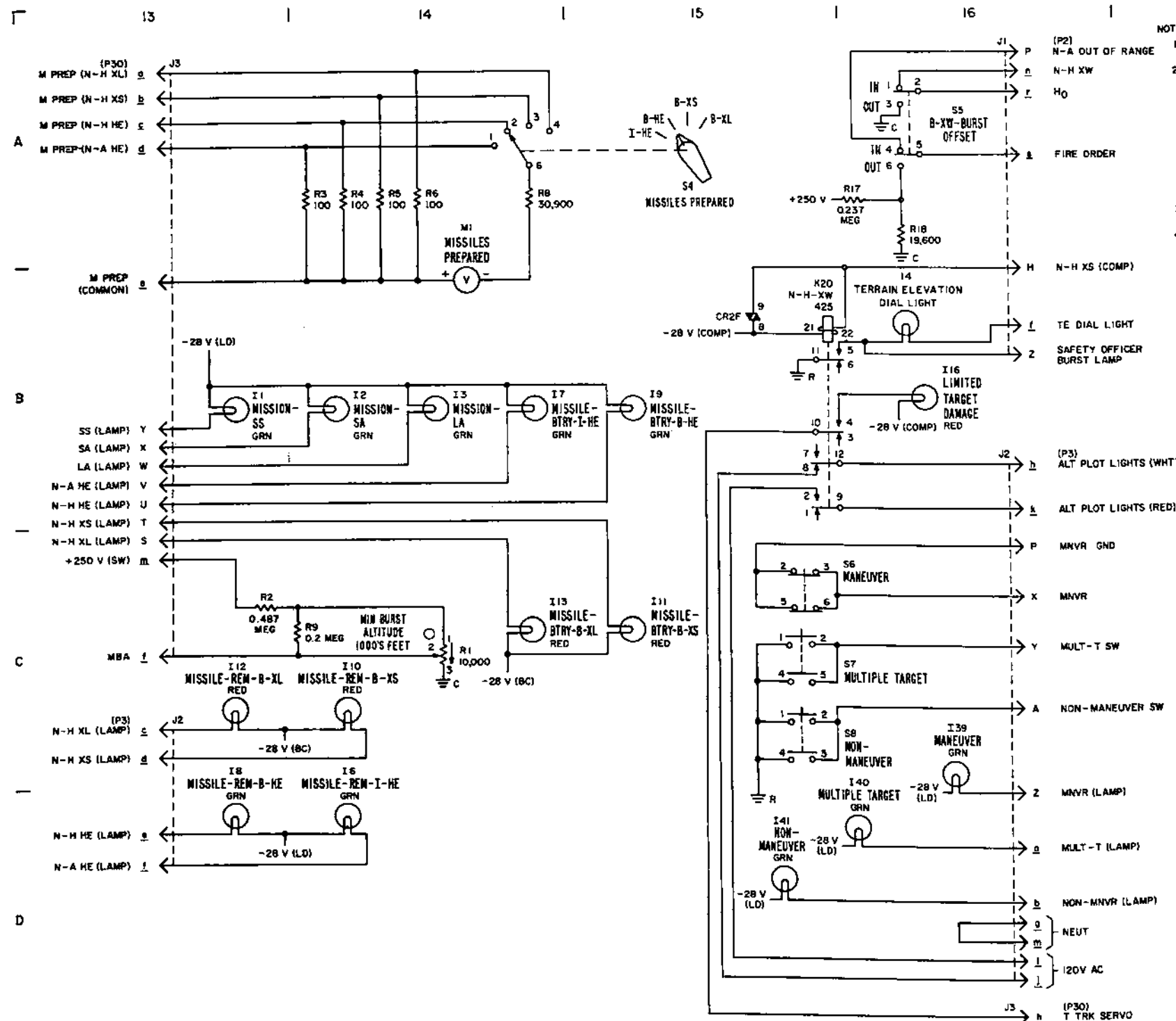


Figure 15 (CMHA)—Continued, sheet 2 of 4.

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NOTES:

1. ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
2. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:
 

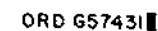
K1-5,6,11	K21-3,4,10,5,6,11,7,8,12
K3-5,6,11,7,8,12	K22-3,4,10,5,6,11,7,8,12
K4-5,6,11,7,8,12	J1-B,1,8,12
K7-5,6,11,7,8,12	J2-W
K8-5,6,11	J3-1,8
K13-5,6,11	S3-5,6
K14-5,6,11	S4-7,8,9,10,12
K15-5,6,11	S2A-5,11
K16-5,6,11	S2B-5,11
K17-5,6	S2C-5,11
K18-5,6,11	S2D-3,7,8,9,10,11,12
K19-5,6,11	
3. FOR ALL CONNECTIONS TO THIS ASSEMBLY SEE FIGURE 3 (N-H) OR FIGURE 7 (INH), TM 9-1430-257-20/10R FIGURE 65, TM 9-1430-258-20
4. FOR FUNCTIONAL REFERENCE, SEE FIGURES 35,36,37,38,39,41,43, 44, TM 9-1430-254-20 OR FIGURES 30,32,60,61,62,63,67,68,69, 78,80,81,83, TM 9-1430-255-20

ORD 657432

## Battery Signal Panel-Indicator 9155164—Apparatus List

Reference description	Ordinance part No.	Part description
CR1, CR2, CR3 .....	7599075	RESISTOR, VOLTAGE SENSITIVE: 21v dc min, 32v dc max reqd to pass 5 ma.
CR4 <sup>1</sup> .....	7605693	RESISTOR, VOLTAGE SENSITIVE: 24v dc min, 36v dc max reqd to pass 6 ma.
CR4 <sup>2</sup> .....	8515017	RESISTOR, VOLTAGE SENSITIVE: 24v dc min, 36v dc max reqd to pass 6 ma.
I1, I2, I3, I6, I7, I8, I9, I10, I11, I12, I13, I14, I15, I16, I17, I18, I19, I20, I21, I22, I23, I24, I25, I26, I27, I28, I29, I30, I31, I32, I33, I34, I35, I36, I37, I38, I39, I40, I41.	573440	LAMP, INCANDESCENT: 28v, 0.04 amp, type 327
I4 .....	572994	LAMP INCANDESCENT: 24-28v, 0.035 amp, type 1819
J1 .....	8024534	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 37 male cont.
J2 .....	8019340	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 35 male cont.
J3 .....	7599618	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 35 male cont.
K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, K14, K15, K16, K17, K18, K19, K20, K21, K22.	9009252	RELAY, ARMATURE: 4 pdt; cont 110v ac or 26v dc, 3 amp, coil 13-18v dc, 425 ohm.
M1 .....	8174012	METER, ARBITRARY SCALE: dc, range 0-50 $\mu$ a $\pm$ 2% of full scale.
R1 .....	9138955	RESISTOR, VARIABLE: wire wound 4w, 10,000 ohm $\pm$ 1%
R2 .....	8023293	RESISTOR FIXED FILM: 1w, 0.487 meg $\pm$ 1%
R3, R4, R5, R6 .....	7622587	RESISTOR FIXED FILM: 1w, 100 ohm $\pm$ 1%
R8 .....	8516335	RESISTOR, FIXED, FILM: 1w, 30,900 ohm $\pm$ 1%
R9 .....	7599237	RESISTOR, FIXED, FILM: 1w, 0.2 meg $\pm$ 1%
R11, R12, R13, R14, R15, R16 .....	MS35043-121	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 27,000 ohm $\pm$ 5%, type RC20GF273J.
R17 .....	8017782	RESISTOR, FIXED, FILM: 1w, 0.237 meg $\pm$ 1%
R18 .....	80223280	RESISTOR, FIXED, FILM: 1w, 19,600 ohm $\pm$ 1%
S1 .....	9154861	SWITCH, ROTARY: 9 pole 3 position, 3 sec
S2 .....	8517321	SWITCH, ROTARY: 8 pole 4 position, 4 sec
S3, S6, S7, S8 .....	9000695	SWITCH, PUSH: dpdt, normally open; 250v dc, 1 $\frac{1}{2}$ amp, 125v dc, 3 amp.
S4 .....	8517322	SWITCH, ROTARY: 2 pole 4 position, 6 sec
S5 .....	9001495	SWITCH, TOGGLE: dpdt: 125v dc, 5 amp; type ST22N

<sup>1</sup>Systems 1001-1058.<sup>2</sup>Systems 1059-



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## Tactical Control-Indicator 9142894--Apparatus List

Reference designation	Ordinance part No.	Part description
B1 .....	7674819	SYNCHRO, RECEIVER: 115v ac, 400 cps, type 23TR4
CR1 .....	9007519	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon, type 1N485B
CR2 .....	9740822	SEMICONDUCTOR DEVICE, DIODE: rectifying, type IN664
I1, I2, I3, I4, I5, I6, I7, I8, I9, I10.	573440	LAMP, INCANDESCENT: 28v, 0.04 amp, type 327
I12, I13 .....	572994	LAMP, INCANDESCENT: 24-28v, 0.035 amp, type 1819
I14 .....	7605718	LAMP, GLOW: neon, 105-125v, 1/25w, type NE67
J1 .....	8019340	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 35 male cont
J2 .....	7599618	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 35 male cont
J3 .....		CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 35 male cont (WECO-BA98191-100)
M1 .....	8174002	METER, ARBITRARY SCALE: range 0-1, 500, $\pm 3\%$ of full linear scale lengths
M2 .....	9003931	METER, ARBITRARY SCALE
M3 .....	9144172	METER, ARBITRARY SCALE: 1375 ohm $\pm 20\%$ across term., $\pm 2\%$ of full scale deflection at 25°C
R1 .....	8176071	RESISTOR, VARIABLE: wire wound; 50w, 100 ohm $\pm 10\%$ , type RP151RD101KK
R2 .....	8019531	RESISTOR, FIXED, FILM: 1w, 464 ohm $\pm 1\%$
R3 .....	8518494	RESISTOR, FIXED, FILM: 1w, 2.13 meg $\pm 1\%$
R6 .....	MS35043-85	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 820 ohm $\pm 5\%$ , type RC20GR821J
R7 .....	MS35044-222	RESISTOR, FIXED, COMPOSITION: 1w, 560 ohm $\pm 10\%$ , type RC32GF561K
S1, S2, S11, S12, S13, S14, S15, S16, S17, S19.	9000695	SWITCH, PUSH: dept, normally open; 250v dc, 1- $\frac{1}{2}$ amp, 125v dc, 3 amp
S3 .....	8513460	SWITCH, ROTARY: 6 pole 4 position, 3 sec
S4, S5, S6, S7, S9, S18	MS35059-17	SWITCH, TOGGLE: dpdt; 30v dc, 18 amp, 115v ac, 11 amp; type ST52R
S8 .....	7614585	SWITCH, ROTARY: 4 pole 5 position, 2 sec
S10 .....		SWITCH: (WECO-G243485-2)
T1, T3 .....	9011322	TRANSFORMER, VARIABLE POWER: 115v, 400 cps input, 0-135v at 5 amp output
T2 .....	7605294	TRANSFORMER, VARIABLE POWER: 115v input, 0-135v output, 7.5 amp load
T4 .....	7605338	TRANSFORMER, AUDIO FREQUENCY: input; 827 ohm input, 3,050 ohm output
TC1 .....	8015845	THERMOCOUPLE, HEATING ELEMENT: arbitrary scale meter, vacuum type, 15 ma

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C4

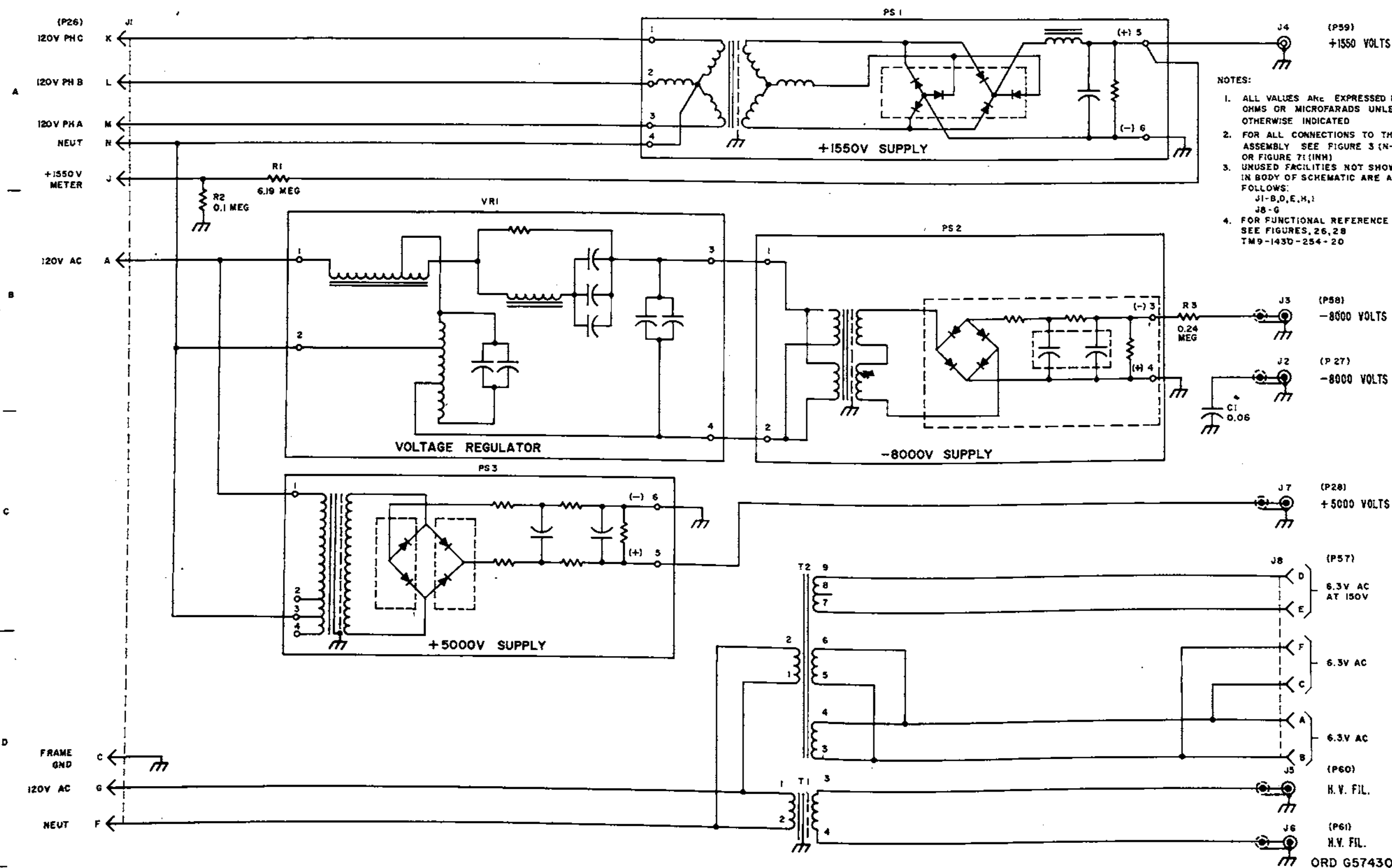


Figure 17 (U). PPI HV power supply 9142872—schematic diagram.

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PPI HV Power Supply 9007757—Apparatus List

Reference designation	Ordinance part No.	Part description
C1.....	9144222	CAPACITOR, FIXED, PLASTIC DIELECTRIC: 10,000v dc, 0.06uf $\pm 20\%$
J1.....	9006774	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 14 male cont
J2, J3, J5, J6, J7.....	8175024	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 male cont
J4.....	8107109	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG931/U
J8.....	9006775	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 7 female cont
PS1.....	8519407	POWER SUPPLY: input 3 ph, 208v, 400 cps, output, 1,550v at 0.1 amp
PS2.....	8519408	POWER SUPPLY: input 120v, 400 cps, output 8,000v at 1.5 ma
PS3.....	8519409	POWER SUPPLY: input 120v, 400 cps, output 5,000v at 1.5 ma
R1.....	8519000	RESISTOR, FIXED, FILM: 2w, 6.19 meg $\pm 1\%$
R2.....	MS35043-135	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm 5\%$ , type RC20GF104J
R3.....	MS35044-158	RESISTOR, FIXED, COMPOSITION: 1w, 0.24 meg $\pm 5\%$ , type RC32GF244J
T1.....	8519001	TRANSFORMER, POWER, STEP-DOWN: sgls-ph; input, 120v, 400 cps, 2 output wnd, 6.4v ea at 1.8 amp
T2.....	7605345	TRANSFORMER, POWER, STEP-DOWN: sgls-ph; input, 120v, 400 cps, 3 output wnd, 6.4v at 10 amp, 6.4v at 7 amp, and 6.4v at 1.5 amp
VR1.....	8519410	REGULATOR, VOLTAGE: ferro-resonant type, 120v ac, 400 cps input, 164v ac $\pm 1\frac{1}{4}\%$ output

Figure 17. (U) PPI HV power supply - 9142872—schematic diagram.

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C10

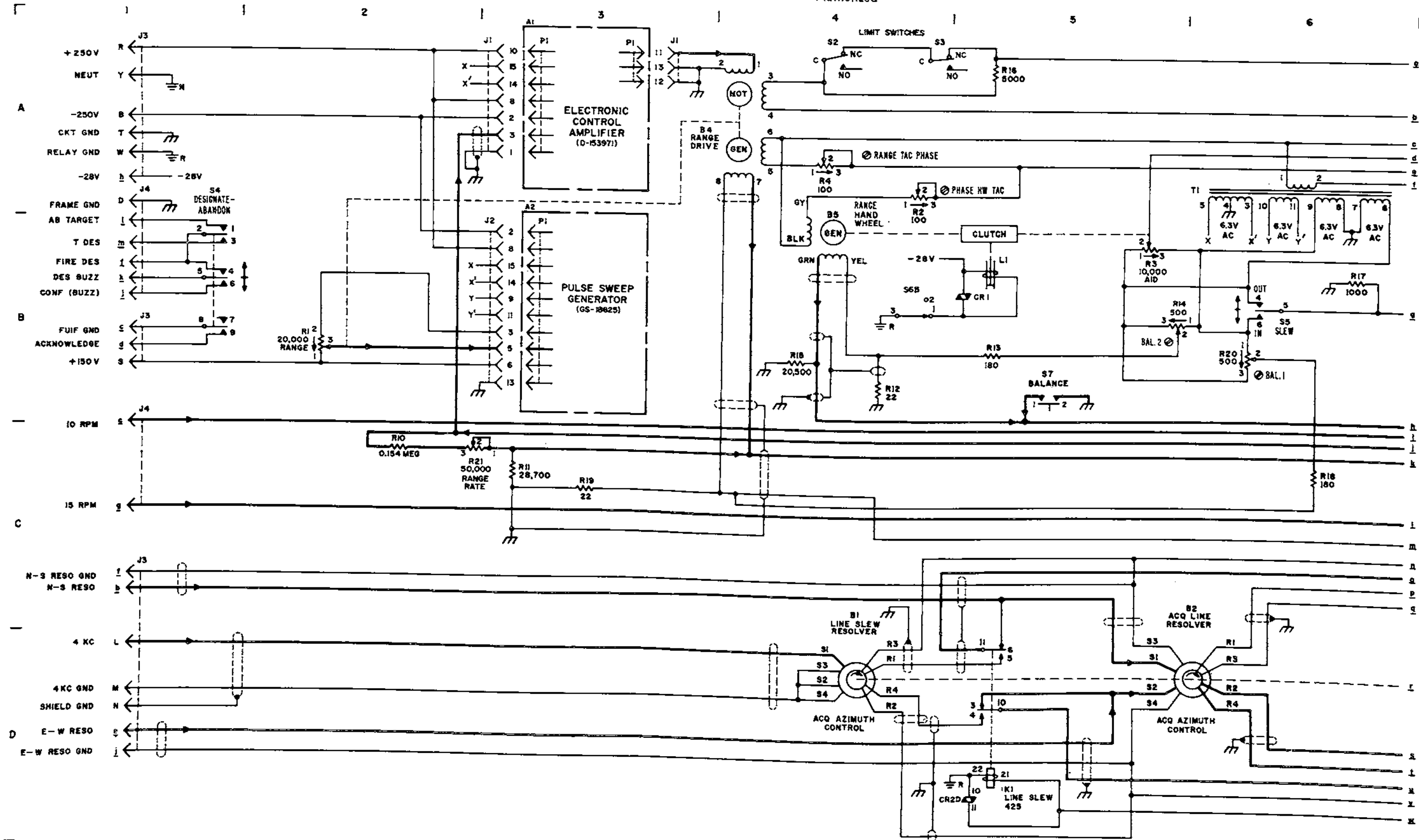
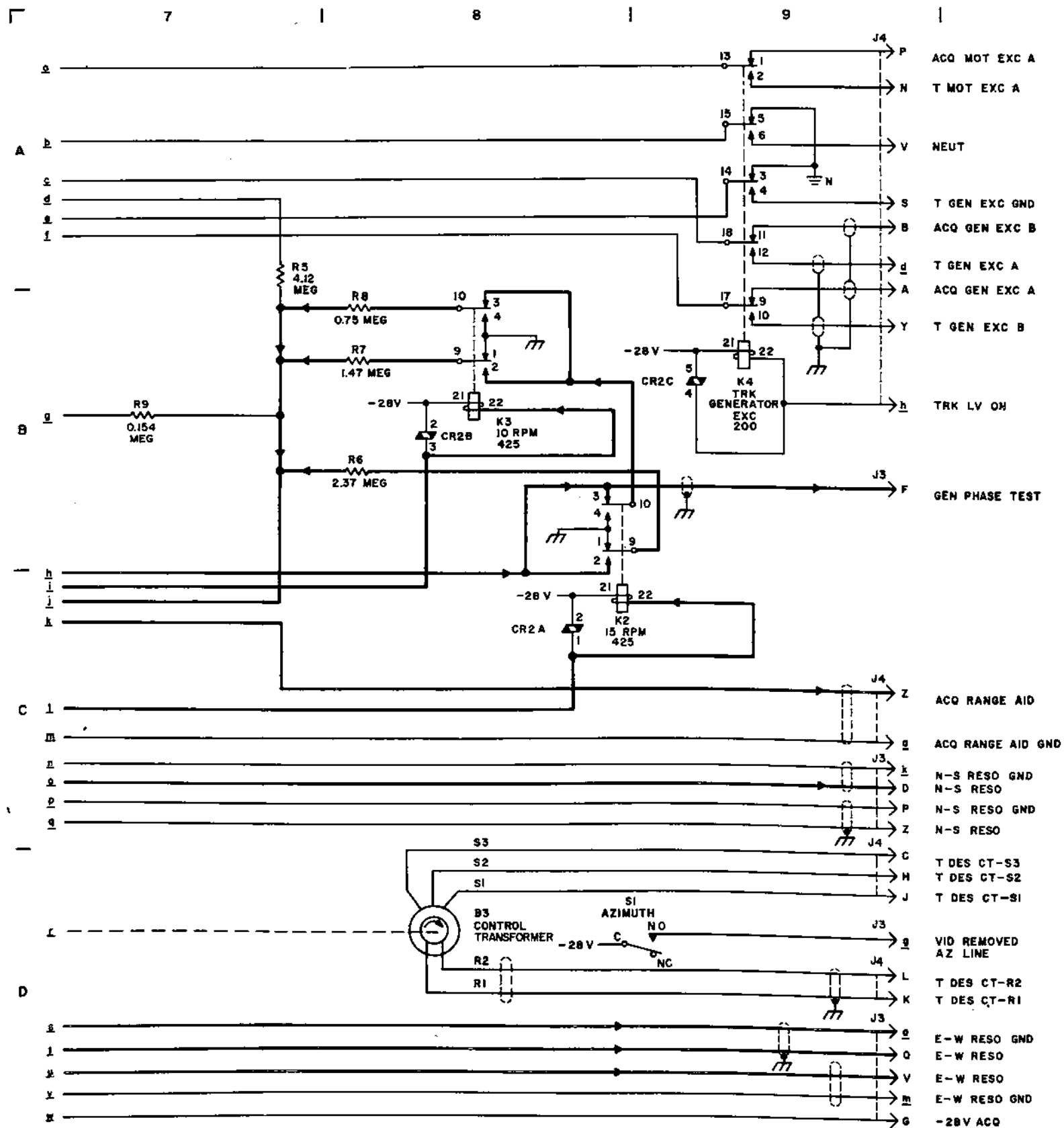


Figure 18 (U). Target designate control-indicator 9007683—schematic diagram (sheet 1 of 2).

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## NOTES:

1. ALL VALUES ARE EXPRESSED IN OHMS UNLESS OTHERWISE INDICATED.
2. FOR ALL CONNECTIONS TO THIS ASSEMBLY SEE SCHEMATIC OF BATTERY CONTROL CONSOLE (GS-17583) 8173147.
3. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
 CR2-6,7,8,9  
 J1-4,5,6,7,9  
 J2-1,4,7,10,12  
 J3-A,C,E,H,J,K,U,X  
 J4-E,F,G,M,R,T,U,W,X,d,g  
 K1-1,2,7,8,9,12  
 K2-5,6,7,8,11,12  
 K3-5,6,7,8,11,12  
 K4-7,8,16  
 S4-10,11,12  
 S5-1,2,3  
 S6-4,5,6,7,8,9  
 S7-3,4,5,6
4. FOR FUNCTIONAL REFERENCE REFER TO TM9-1430-254-20.

Figure 18 (U). Continued (sheet 2 of 2).

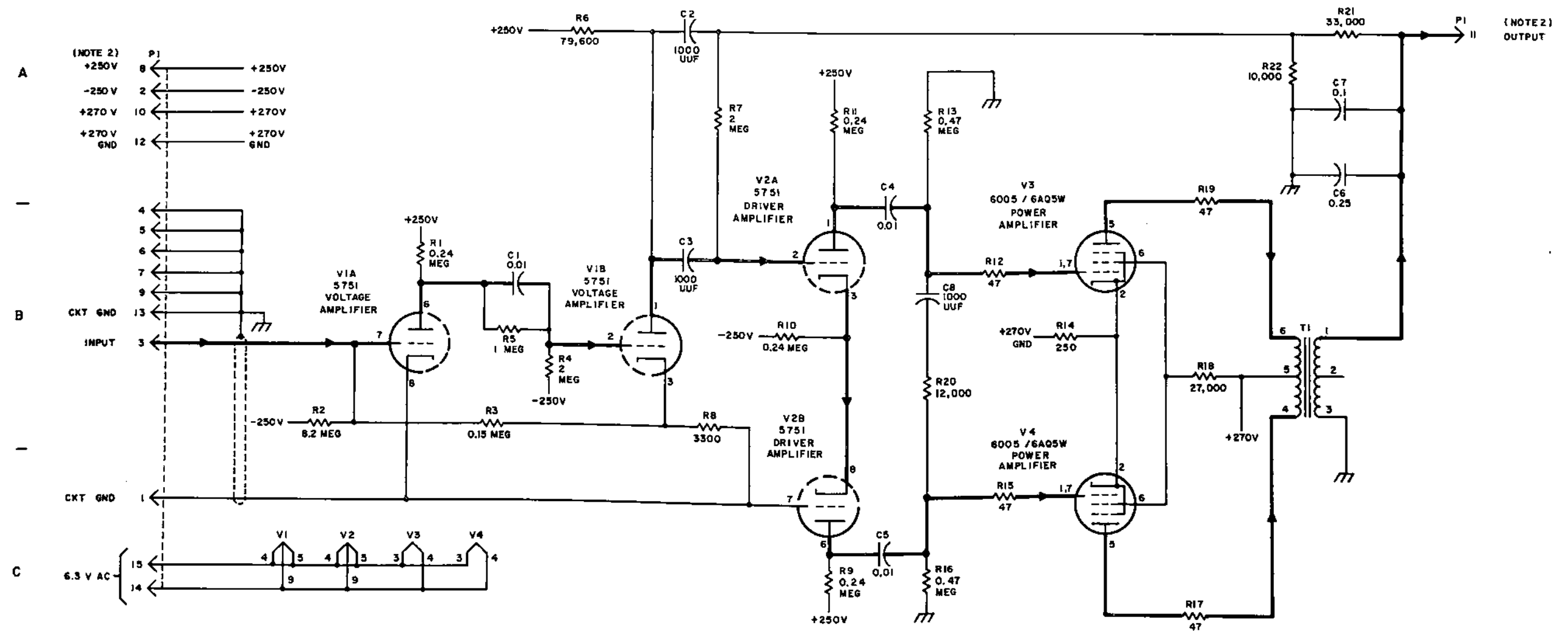
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Ref design	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
A1					7614253	D153971
A2					9007684	GS-18625
B1					7677411	
B2					7677411	
B3					7674821	
B4					8517079	
B5					8519075	
CR1					7601930	
CR2					7599075	
J1					7599367	
J2					7599367	
J3					MS3102A36-15P	
J4					MS3102A28-15P	
K1					7599255	
K2					7599255	
K3					7599255	
K4					8515919	
L1					7604761	
R1	20,000	5	2		7599533	
R2	100	10	2		7598955	
R3	10,000	5	3.5		7604766	
R4	100	10	2		7598955	
R5	3.83 meg	5	1		9011908	
R6	2.37 meg	5	1		8019556	
R7	1.47 meg	5	1		8019548	
R8	0.75 meg	5	1		7602990	
R9	0.154 meg	5	1		8019768	
R10	0.154	5	1		8019768	
R11	28,700	2	1		7602501	
R12	22	5	0.5		MS35043-47	
R13	180	5	2		MS35045-69	
R14	500	20	2		7599792	
R15	20,500	5	1		7602369	
R16	5,000	5	22		9000817	
R17	1,000	5	0.5		MS35043-87	
R18	180	5	2		MS35045-69	
R19	22	5	0.5		MS35043-47	
R20	500	5	2		7599792	
R21	50,000	5	2		8177402	
S1					7604293	
S2					7602618	
S3					7602618	
S4					8193082	
S5					9001488	
S6					8512449	
S7					9000695	
T1					7605565	

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CONNECTOR	MATING CONNECTOR											
	TM9-1430-259-20										TM9-1430-257-20/1	
	(FIG. 42 N-H) OR (FIG. 169 INH)							(FIG. 61)			(FIG. 55)	(FIG. 18 N-H) OR (FIG. 79 INH)
	AZIMUTH	AZIMUTH	ELEVATION	ELEVATION	RANGE	RANGE	TARGET DES	AZIMUTH	RANGE	ELEVATION		
P1	J10	J12	J5	J6	J14	J17	J13	J8	J12	J5	J15	J1

**NOTES:**

- 1. ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED**
- 2. THIS ASSEMBLY IS A MULTIPLE-USE ITEM. MATING CONNECTORS ARE SHOWN IN TABLES**

CONNECTOR	MATING CONNECTOR														
	TM9-1430-258-20														
	(FIG. 16)							(FIG. 2)							
	XSL	XSR	YSL	YSR	HSL	HSR	TSLR	AG	B	TA	CA	TT	VC	TI	SPARE
PJ	J661	J664	J665	J668	J681	J684	J685	J41	J44	J45	J48	J51	J54	J55	J58

Figure 19 (U). Low-power servo amplifier 7614253—schematic diagram.

Low-Power Servo Amplifier 7614253—Apparatus List

Reference designation	Ordinance part No.	Part description
C1, C4 .....	7631624	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f $\pm$ 20%, type CM35B103M.
C2, C3 .....	7599233	CAPACITOR, FIXED, MICA DIELECTRIC: 200v ac or dc, 1,000 $\mu$ f.
C6 .....	7631684	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.25 $\mu$ f $\pm$ 10%, type CP53B1EF254K.
C7 .....	8177449	CAPACITOR, FIXED, PAPER DIELECTRIC: 100v dc, 0.1 $\mu$ f $\pm$ 10%, type CP53B1EF104K.
C8 .....	521018	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 1,000 $\mu$ f $\pm$ 10%, type CM30B102K.
P1 .....	7598051	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.
R1, R9, R10, R11 .....	MS35043-144	RESISTOR, FIXED, COMPOSITION: 1/2w, 0.24 meg $\pm$ 5%, type RC20GF244J.
R2 .....	MS35043-181	RESISTOR, FIXED, COMPOSITION: 1/2w, 8.2 meg $\pm$ 5%, type RC20GF825J.
R3 .....	7605766	RESISTOR, FIXED, FILM 1/2w, 0.15 meg $\pm$ 1%
R4 .....	MS35043-166	RESISTOR, FIXED, COMPOSITION: 1/2w, 2 meg $\pm$ 5%, type RC20GF205J.
R5 .....	MS35043-159	RESISTOR, FIXED, COMPOSITION: 1/2w, 1 meg $\pm$ 5%, type RC20GF105J.
R6 .....	7599234	RESISTOR, FIXED, FILM: 1w, 79,600 ohm $\pm$ 1%
R7 .....	7599055	RESISTOR, FIXED, FILM: 1w, 2 meg $\pm$ 1%
R8 .....	MS35043-99	RESISTOR, FIXED, COMPOSITION: 1/2w, 3,300 ohm $\pm$ 5%, type RC20GF332J.
R12, R15, R17, R19 .....	MS35043-5	RESISTOR, FIXED, COMPOSITION: 1/2w, 47 ohm $\pm$ 10%, type RC20GF470K.
R13, R16 .....	MS35043-29	RESISTOR, FIXED, COMPOSITION: 1/2w, 0.47 meg $\pm$ 10%, type RC20GF474K.
R14 .....	522623	RESISTOR, FIXED, WIRE WOUND: power type, tubr, tab term., 8w, 250 ohm $\pm$ 5%, type RW30G251.
R18 .....	MS35044-135	RESISTOR, FIXED, COMPOSITION: 1w, 27,000 ohm $\pm$ 10%, type RC32GF273K.
R20 .....	MS35043-210	RESISTOR, FIXED, COMPOSITION: 1/2w, 12,000 ohm $\pm$ 10%, type RC20GF123K.
R21 .....	MS35043-123	RESISTOR, FIXED, COMPOSITION: 1/2w, 33,000 ohm $\pm$ 5%, type RC20GF333J.
R22 .....	MS35043-111	RESISTOR, FIXED, COMPOSITION: 1/2w, 10,000 ohm $\pm$ 5%, type RC20GF103J.
T1 .....	7605337	TRANSFORMER, AUDIO FREQUENCY: plate coupling, output; 16,000 ohm input, 1,400 ohm or 750 ohm output.
V1, V2 .....	8260326	ELECTRON TUBE: type 5751
V3, V4 .....	8298924	ELECTRON TUBE: type 605/6AQ5W

### MEASUREMENT NOTES

## 1. General

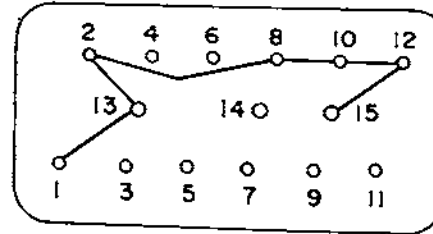
- a. Measurements are made with all tubes in sockets.
- b. Notation 3 to 4 in the Pin column indicates that measurement is made between pins 3 and 4; notation 4, 5 to 9 indicates that measurement is made between pin 4 and pin 9 or pin 5 and pin 9.
- c. All values given are typical.

## 2. Voltage

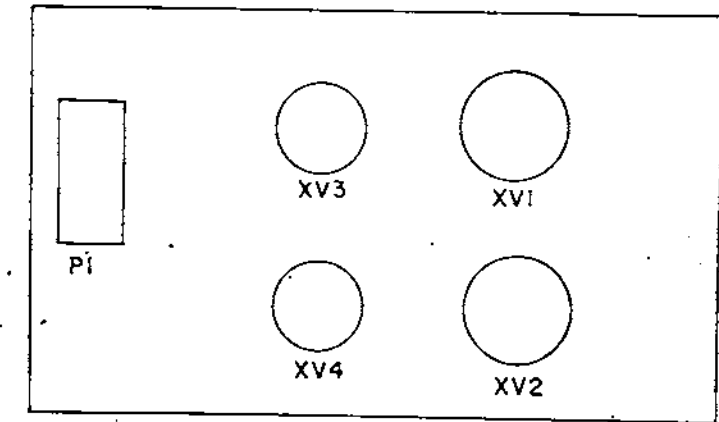
- a. Measurements are made with system energized through low voltage condition, with chassis in HSL amplifier position, and with HSL modulator removed.
- b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- c. Voltages are +dc measured to ground, unless otherwise indicated.
- d. A dash in the Volts column indicates a voltage of no significance.

### 3. Resistance

- a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- b. Measurements are made with all external cables disconnected and connector P1 strapped as indicated.
- c. Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR PI



BOTTOM VIEW OF CHASSIS

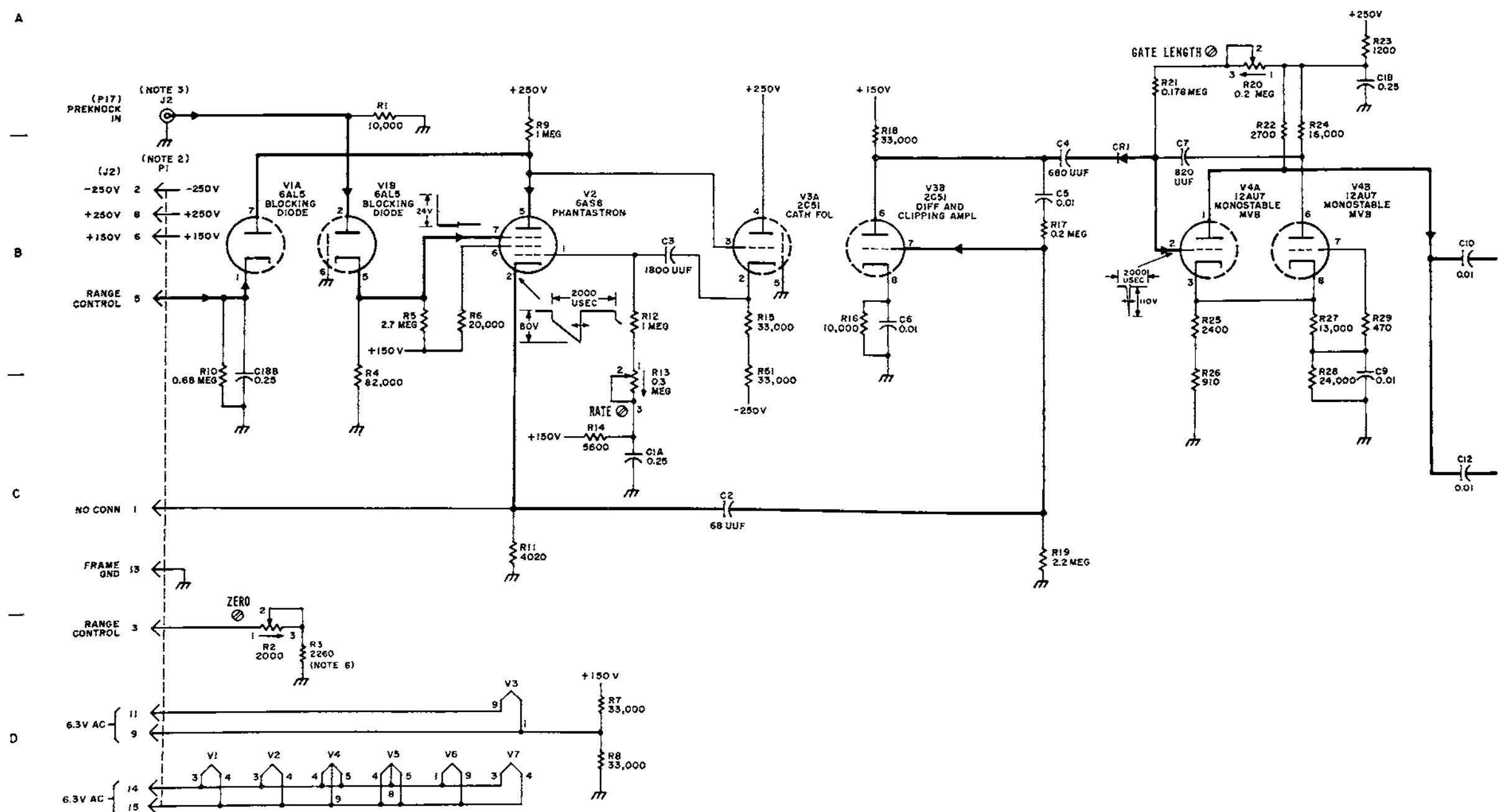
Ref desig		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A V1B	5751	Voltage amplifier	6 1	210 210	220,000 80,000							7 2	50 54	147,000 765,000	8 3	0 5.6	0 3,300	4, 5 to 9	6.3 ac	< 1
XV2	V2A V2B	5751	Driver amplifier	1 6	245 59	240,000 240,000							2 7	0 0	2 meg 0	3 8	54 54	240,000 240,000	4, 5 to 9	6.3 ac	< 1
XV3	V3	6005/ 6AQ5W	Power amplifier	5	255	210	Same as cathode			6	195	27,000	1, 7	—	470,000	2	12	250	3 to 4	6.3 ac	< 1
XV4	V4	6005/ 6AQ5W	Power amplifier	5	255	210	Same as cathode			6	195	27,000	1, 7	-0.4	470,000	2	12	250	3 to 4	6.3 ac	< 1

< Less than.

< Less than.

Figure 19A. (U) Low-power servo amplifier 7614253—voltage and resistance chart.

RA PD 417728



ORD G27193

Figure 20. (CMHA) Acquisition range generator 9007684 - schematic diagram.

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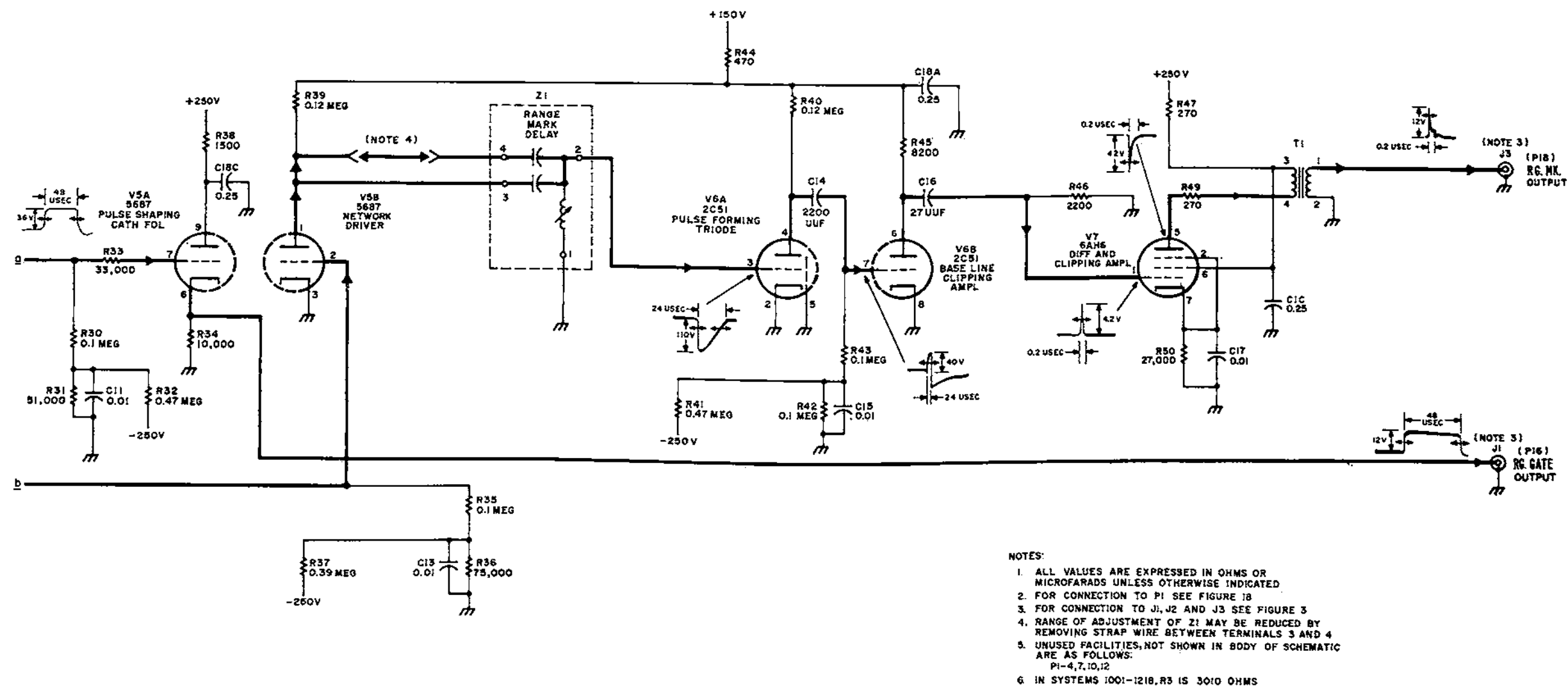


Figure 20. (CMHA) Acquisition range generator 9007684 - schematic diagram—Continued.

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Modified Handling  
Authorized

Acquisition Range Generator 9007684 - Apparatus List

Reference designation	Ordnance part No.	Part description
C1, C18-----	7654986	CAPACITOR, FIXED, PAPER DIELECTRIC: 3 sec, 600v dc, 0.25-0.25-0.25 $\mu$ f $\pm$ 20%, type GP69B5EF254M.
C2-----	522233	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 68 $\mu$ f $\pm$ 10%, type CM20B680K.
C3-----	9009618	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 1,800 $\mu$ f $\pm$ 2%.
C4-----	7631694	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 680 $\mu$ f $\pm$ 10%, type CM25B681K.
C5, C6, C9, C10, C11, C12, C13, C15, C17.	522119	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f $\pm$ 10%, type CM35B103K.
C7-----	521106	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 820 $\mu$ f $\pm$ 5%, type CM25D821J.
C14-----	521022	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 2,200 $\mu$ f $\pm$ 10%, type CM30B222K.
C16-----	522228	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 27 $\mu$ f $\pm$ 10%, CM20B270K.
CR1-----	7598937	SEMICONDUCTOR DEVICE, DIODE: rectifying, germanium; type 1N43.
J1, J2, J3-----	8531071	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG625B/U.
P1-----	7598051	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.
R1, R16, R34-----	MS35043-19	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 10,000 ohm $\pm$ 10%, type RC20GF103K.
R2-----	7602551	RESISTOR, VARIABLE: wire wound; 2w, 2,000 ohm $\pm$ 10%
R3 <sup>1</sup> -----	7601579	RESISTOR, FIXED, WIRE WOUND: $\frac{1}{4}$ w, 3,010 ohm $\pm$ 1%
R3 <sup>2</sup> -----	8017858	RESISTOR, FIXED, WIRE WOUND: 1w, 2260 ohm $\pm$ 1%
R4-----	MS35043-133	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 82,000 ohm $\pm$ 5%, type RC20GF823J.
R5-----	MS35043-169	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2.7 meg $\pm$ 5%, type RC20GF275J.
R6-----	7599084	RESISTOR, FIXED, WIRE WOUND: power type, 10w, 20,000 ohm $\pm$ 5%.
R7, R8, R18, R33-----	MS35043-22	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 33,000 ohm $\pm$ 10%, type RC20GF333K.
R9-----	7599186	RESISTOR, FIXED, FILM: 1w, 1 meg $\pm$ 1%
R10-----	MS35043-30	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.68 meg $\pm$ 10%, type RC20GF684K.
R11-----	7601584	RESISTOR, FIXED, WIRE WOUND: $\frac{1}{4}$ w, 4,020 ohm $\pm$ 1%
R12-----	7602427	RESISTOR, FIXED, WIRE WOUND: $\frac{1}{2}$ w, 1 meg $\pm$ 1%
R13-----	8520046	RESISTOR, VARIABLE: composition; 2w, 0.3 meg $\pm$ 10%
R14-----	MS35043-208	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 5,600 ohm $\pm$ 10%, type RC20GF562K.
R15, R51-----	MS35045-123	RESISTOR, FIXED COMPOSITION: 2w, 33,000 ohm $\pm$ 5%, type RC42GF333J.
R17-----	MS35043-142	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.2 meg $\pm$ 5%, type RC20GF204J.
R19-----	MS35043-33	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2.2 meg $\pm$ 10%, type RC20GF225K.
R20-----	7599399	RESISTOR, VARIABLE: composition; 2w, 0.2 meg $\pm$ 10%

Reference designation	Ordnance part No.	Part description
R21-----	8019549	RESISTOR, FIXED, FILM: 1w, 0.178 meg $\pm$ 5%
R22-----	MS35045-206	RESISTOR, FIXED, COMPOSITION: 2w, 2,700 ohm $\pm$ 10%, type RC42GF272K.
R23-----	MS35045-204	RESISTOR, FIXED, COMPOSITION: 2w, 1,200 ohm $\pm$ 10%, type RC42GF122K.
R24-----	MS35043-116	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 16,000 ohm $\pm$ 5%, type RC20GF163J.
R25-----	MS35045-96	RESISTOR, FIXED, COMPOSITION: 2w, 2,400 ohm $\pm$ 5%, type RC42GF242J.
R26-----	MS35043-86	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 910 ohm $\pm$ 5%, type RC20GF911J.
R27-----	MS35043-114	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 13,000 ohm $\pm$ 5%, type RC20GF133J.
R28-----	MS35043-120	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 24,000 ohm $\pm$ 5%, type RC20GF243J.
R29, R44-----	MS35043-11	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 470 ohm $\pm$ 10%, type RC20GF471K.
R30, R35, R43-----	MS35043-25	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm$ 10%, type RC20GF104K.
R31-----	MS35043-128	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 51,000 ohm $\pm$ 5%, type RC20GF513J.
R32, R41-----	MS35043-151	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.47 meg $\pm$ 5%, type RC20GF474J.
R36-----	MS35043-132	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 75,000 ohm $\pm$ 5%, type RC20GF753J.
R37-----	MS35043-149	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.39 meg $\pm$ 5%, type RC20GF394J.
R38-----	MS35043-14	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 1,500 ohm $\pm$ 10%, type RC20GF153K.
R39, R40-----	MS35043-216	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.12 meg $\pm$ 10%, type RC20GF124K.
R42-----	MS35043-135	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm$ 5%, type RC20GF104J.
R45-----	MS35043-209	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 8,200 ohm $\pm$ 10%, type RC20GF822K.
R46-----	MS35043-15	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2,200 ohm $\pm$ 10%, type RC20GF222K.
R47, R49-----	MS35043-200	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 270 ohm $\pm$ 10%, type RC20GF271K.
R50-----	MS35043-212	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 27,000 ohm $\pm$ 10%, type RC20GF273K.
T1-----	7605344	TRANSFORMER, PULSE: impedance matching, 60,000 cps, input 0.5 ohm, 1 output wnd, 13 ohm.
V1-----	7643757	ELECTRON TUBE: type 6AL5
V2-----	7599309	ELECTRON TUBE: type 6AS6
V3, V6-----	7599316	ELECTRON TUBE: type 2C51
V4-----	7599317	ELECTRON TUBE: type 12AU7
V5-----	7599315	ELECTRON TUBE: type 5687
V7-----	7599312	ELECTRON TUBE: type 6AH6
Z1-----	8007201	NETWORK, PULSE DELAY: inductor-capacitor, variable, 11.65-12.05 kc.

<sup>1</sup>Systems 1001-1218

<sup>2</sup>Systems 1219-

Figure 20. (U) Acquisition range generator 9007684 - schematic diagram--Continued.

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# MEASUREMENT NOTES

## 1. General

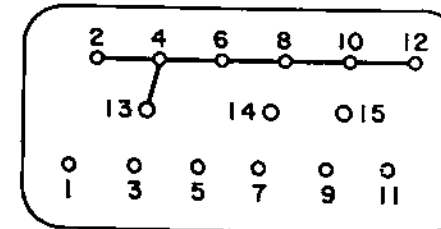
- Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- Notation 3 to 4 in the Pin column indicates that measurement is made between pins 3 and 4; notation 4, 5 to 9 indicates that measurement is made between pin 4 and pin 9 or pin 5 and pin 9; notation 1, 9 indicates that measurement is made between pin 1 and ground or pin 9 and ground.
- All values given are typical.

## 2. Voltage

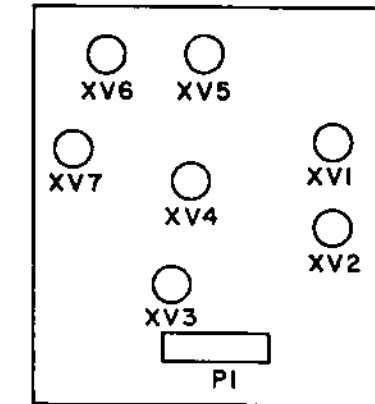
- Measurements are made with system energized through low voltage condition, RANGE switch set to 120,000 volts, and with cables removed from J1, J2, and J3.
- Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- Voltages are +dc measured to ground, unless otherwise indicated.

## 3. Resistance

- Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- Measurements are made with all external cables disconnected and connector P1 strapped as indicated.
- Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR P1



BOTTOM VIEW OF CHASSIS

Ref	desig	Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
				Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	6AL5	Blocking diode	7	63	1 meg										1	63	680,000	3 to 4	6.3 ac	<1
	V1B			2	0	10,000										5	4.5	61,000			
XV2	V2	6AS6	Phantastron	5	63	1 meg	7	4.5	61,000	6	61	20,000	1	19	1.2 meg	2	19	4,000	3 to 4	6.3 ac	<1
XV3	V3A	2C51	Cathode follower Differentiating and clipping amplifier	4	250	0							3	63	1 meg	2	66	66,000	1 to 9	6.3 ac	<3
	V3B			6	138	33,000							7	0	2.2 meg	8	3.8	10,000	1,9	75	16,500
XV4	V4A	12AU7	Monostable multi vibrator	1	175	3,900							2	61	180,000	3	60	3,100	4,5 to 9	6.3 ac	<1
	V4B			6	215	17,200							7	40	10,000	8	60	3,100			
XV5	V5A	5687	Pulse shaping cathode follower Network driver	9	250	1,500							7	-25	180,000	6	0.7	10,000	4,5 to 8	6.3 ac	<1
	V5B			1	150	120,000							2	-40	165,000	3	0	0			
XV6	V6A	2C51	Pulse forming triode Baseline clipping amplifier	4	30	120,000							3	0	1,000	2	0	0	1 to 9	6.3 ac	<1
	V6B			6	150	8,700							7	-43	180,000	8	0	0			
XV7	V7	6AH6	Differentiating and clipping amplifier	5	250	540				6	250	270	1	0	2,200	2,7	9	27,000	3 to 4	6.3 ac	<1

< Less than.

Figure 20A. Acquisition range generator

9007684—voltage and resistance chart.

RA PD 417729

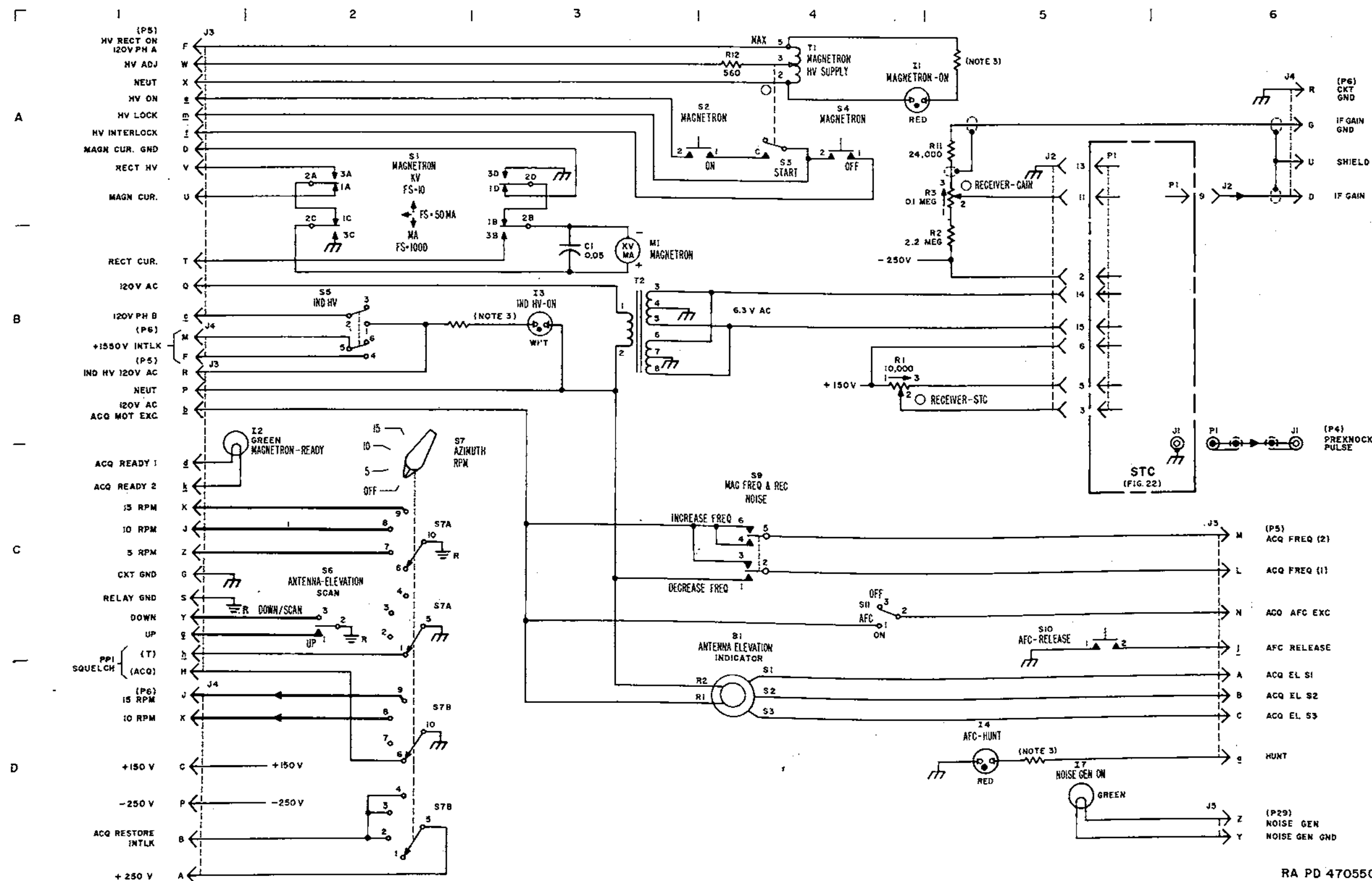


Figure 21. Acquisition control-indicator 9137929 - schematic diagram.

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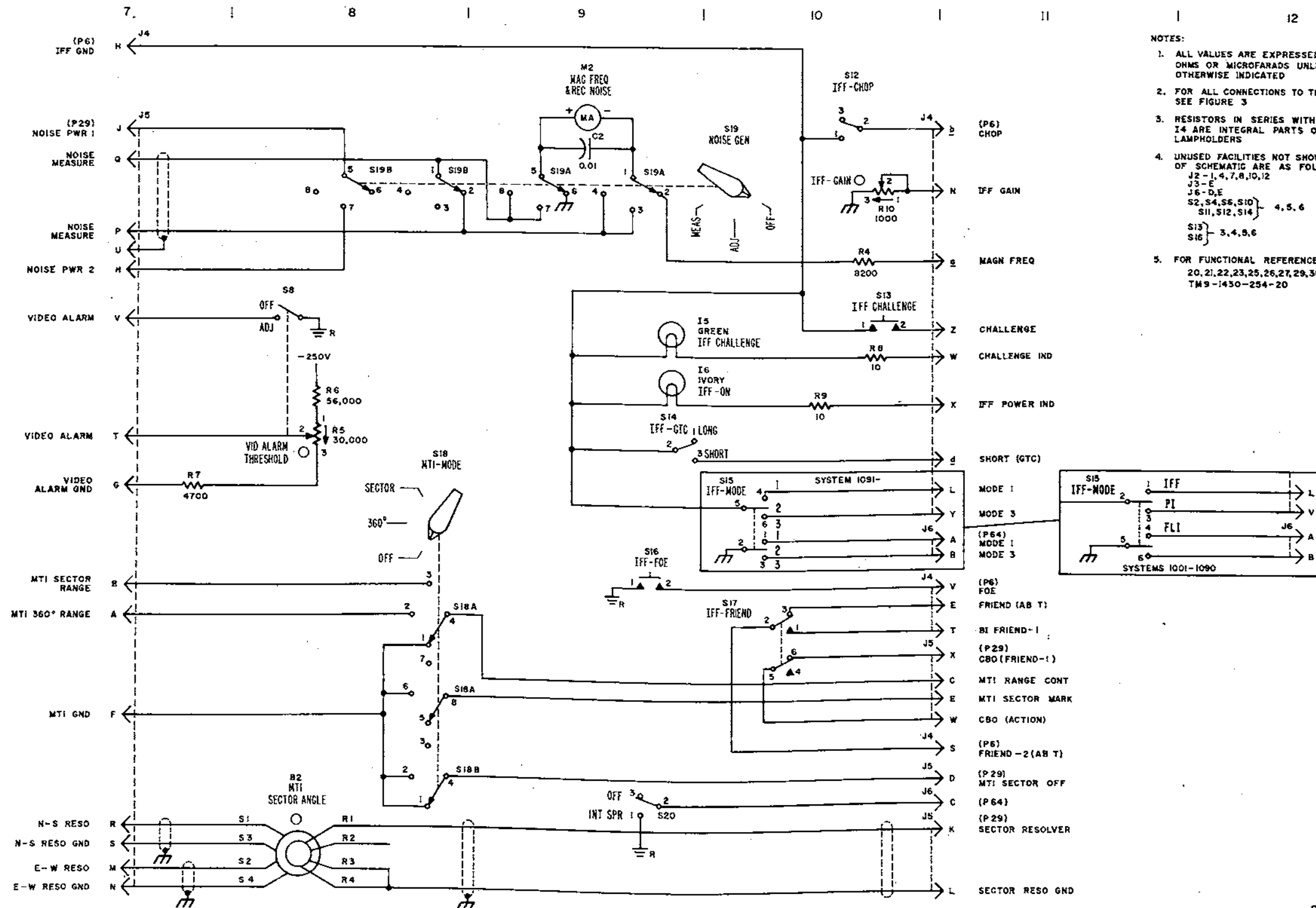


Figure 21. Acquisition control-indicator 9137929 - schematic diagram - Continued

Acquisition Control-Indicator 9137929—Apparatus List

Reference designation	Ordinance part No.	Part description
B1	7674819	SYNCHRO, RECEIVER: 115v ac, 400 cps, type 23TR4 RESOLVER, ELECTRICAL: 90/90v ac, 400 cps; type 23RS4A CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.05 $\mu$ f $\pm 10\%$ , type CP67B1EF503K. CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f $\pm 10\%$ , type CM35B103K. LAMP, GLOW: neon, 105-125v, $\frac{1}{2}$ sw, type NE67 LAMP, INCANDESCENT: 24-28v, 0.035 amp, type 1819 LAMP, INCANDESCENT: 6-8v, 0.15 amp, type 47 CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont. CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 female cont. CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 35 male cont. CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 26 male cont. CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 24 male cont. CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 5 male cont. METER, ARBITRARY SCALE: dc, range 0-100, $\pm 2\%$ of full scale. METER, ARBITRARY SCALE: dc, range 0-100, $\pm 2\%$ of full scale. CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 male cont, type UG260B/U. RESISTOR, VARIABLE: composition; 2w, 10,000 ohm $\pm 10\%$ RESISTOR, FIXED, COMPOSITION: $\frac{1}{4}$ w, 2.2 meg $\pm 10\%$ , type RC20GF225K. RESISTOR, VARIABLE: composition; 2w, 0.1 meg $\pm 10\%$ RESISTOR, FIXED, COMPOSITION: $\frac{1}{4}$ w, 8,200 ohm $\pm 5\%$ , type RC20GF822J. RESISTOR, VARIABLE: composition; 2w, 30,000 ohm $\pm 10\%$ and SWITCH, SPECIAL: spst, 125v ac, 2 amp.
B2	7677411	
C1	7643184	
C2	522119	
I1, I3, I4	7605718	
I2	572994	
I5, I6, I7	504521	
J1	7599662	
J2	7599367	
J3	MS3102A36-15P	
J4	MS3102A28-12P	
J5	8528011	
J6	MS3102A16S-8P	
M1	8174004	
M2	8174005	
P1	MS35170	
R1	7622579	
R2	MS35043-33	
R3	9000886	
R4	MS35043-109	
R5, S8	9009092	

Reference designation	Ordinance part No.	Part description
R6	MS35045-214	RESISTOR, FIXED, COMPOSITION: 2w, 56,000 ohm $\pm 10\%$ , type RC42GF563K.
R7	MS35043-17	RESISTOR, FIXED, COMPOSITION: $\frac{1}{4}$ w, 4,700 ohm $\pm 10\%$ , type RC20GF472K.
R8, R9	MS35043-1	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 10 ohm $\pm 10\%$ , type RC20GF100K.
R10	8012502	RESISTOR, VARIABLE: composition; 2w, 1,000 ohm $\pm 10\%$
R11	MS35043-120	RESISTOR, FIXED, COMPOSITION: $\frac{1}{4}$ w, 24,000 ohm $\pm 5\%$ , type RC20GF243J.
R12	9000283	RESISTOR, FIXED, WIRE WOUND: power type, tubr, tab term., 18w, 560 ohm, type RW33G561.
S1	8175304	SWITCH, LEVER: 3 position, normally open, 125v ac, 1 amp
S2, S4, S10, S13, 16	9000695	SWITCH, PUSH: dpdt, normally open; 250v dc, $1\frac{1}{2}$ amp, 125v dc, 3 amp.
S3	7602825	SWITCH, SENSITIVE: spdt, 250v ac, 5 amp or 125v ac, 10 amp; type SS03A10.
S5, S11, S12, S14, S20	9001495	SWITCH, TOGGLE: dpdt; 250v ac or dc, 2 amp, 125v ac or dc, 5 amp; type ST22N.
S6	MS35059-19	SWITCH, TOGGLE: dpdt; 220v ac, 6 amp, 115v ac, 6 amp; type ST52T.
S7	8005247	SWITCH, ROTARY: 4 pole 3 position, 2 sec
S9	MS35059-18	SWITCH, TOGGLE: dpdt; 115v ac, 15 amp, 30v dc, 18 amp; type ST52S.
S15	MS35059-16	SWITCH, TOGGLE: dpdt; 115v ac, 25 amp, 220v ac, 9 amp; type ST52P.
S17	MS35059-17	SWITCH, TOGGLE: dpdt; 30v dc, 18 amp, 115v ac, 11 amp; type ST52R.
S18	8512470	SWITCH, ROTARY: 2 pole 3 position, 2 sec
S19	8174300	SWITCH, ROTARY: 3 pole 3 position, 2 sec
T1	7606084	TRANSFORMER, VARIABLE, POWER: assy
T2	7605333	TRANSFORMER, POWER, STEP-DOWN: sgle-ph; input, 120v ac, 400 cps, 2 output wnd, 6.4v ea at 1 amp. STC 8512082 (see fig. 22 for component parts)

Figure 21. Acquisition control-indicator 9137929 - schematic diagram—Continued.

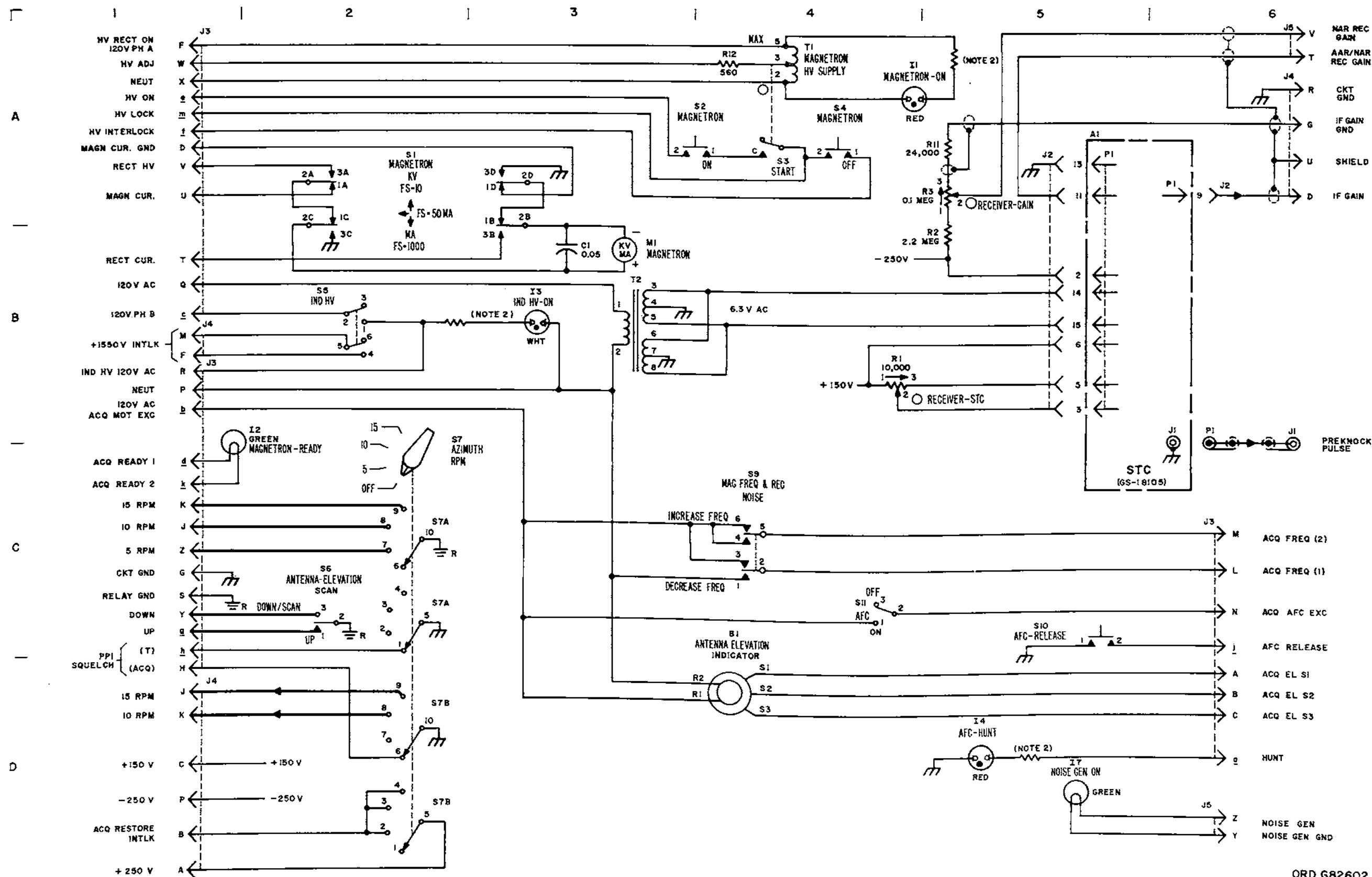
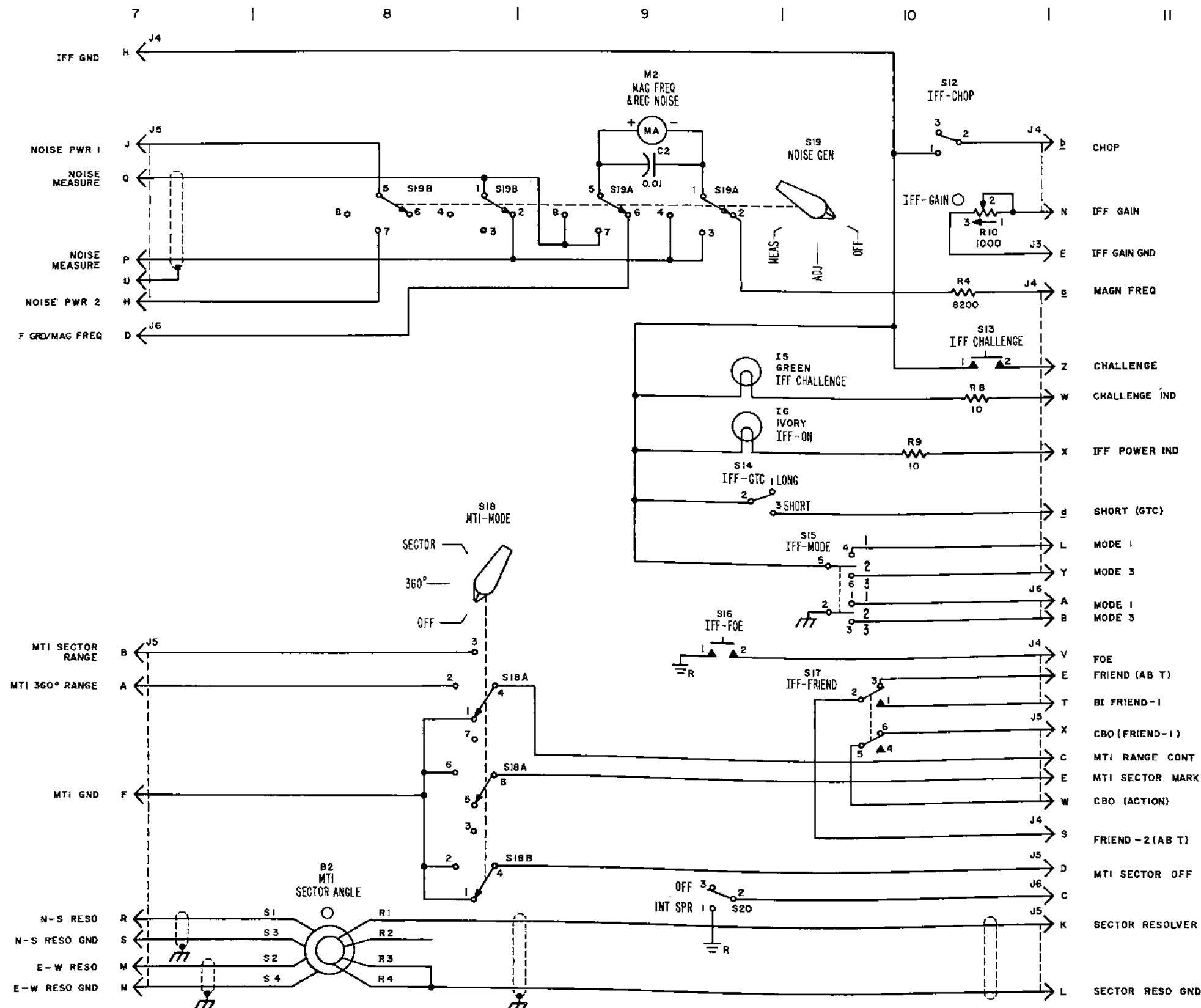


Figure 21.1 (U). Acquisition control-indicator 9985604—schematic diagram (sheet 1 of 2).

ORD G82602



## NOTES:

- ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
- RESISTORS IN SERIES WITH I1, I3 AND I4 ARE INTEGRAL PARTS OF ASSOCIATED LAMP HOLDERS
- UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
 J2-1, 4, 7, 8, 10, 12  
 J5-G  
 J6-E  
 S2, S4, S6, S10 } 4, 5, 6  
 S11, S12, S14 }  
 S13 } 3, 4, 5, 6  
 S16 }

Figure 21.1 (U). Continued (sheet 2 of 2).

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## (U) Acquisition Control Indicator 9985604—Apparatus List

Ref design	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
A1					8512082	GS-18105
B1					7674819	
B2					7677411	
C1	0.05	10		600	7643184	
C2	0.01	10		300	522119	
I1					7605718	
I2					572994	
I3					7605718	
I4					7605718	
I5					504521	
I6					504521	
I7					504521	
J1					7599662	
J2					9150422	
J3					9003422	
J4					9003898	
J5					8528011	
J6					9003583	
M1					8174004	
M2					8174005	
P1					MS35170	
R1	10,000	10	2		7622579	
R2	2.2 meg	10	½		521229	
R3	0.1 meg	10	2		9000886	
R4	8200	5	½		MS35043-109	
R8	10	10	½		MS35043-1	
R9	10	10	½		MS35043-1	
R10	1000	10	2		8012502	
R11	24,000	5	½		MS35043-120	
R12	560	5	18		9000283	
S1					8175304	
S2					9000695	
S3					7602825	
S4					9000695	
S5					9001495	
S6					9001465	
S7					8005247	
S9					9001488	
S10					9000695	
S11					9001495	
S12					9001495	
S13					9000695	
S14					9001495	
S15					9001494	
S16					9000695	
S17					9000774	
S18					8512470	
S19					8174300	
S20					9001495	
T1					7606084	
T2					7605333	

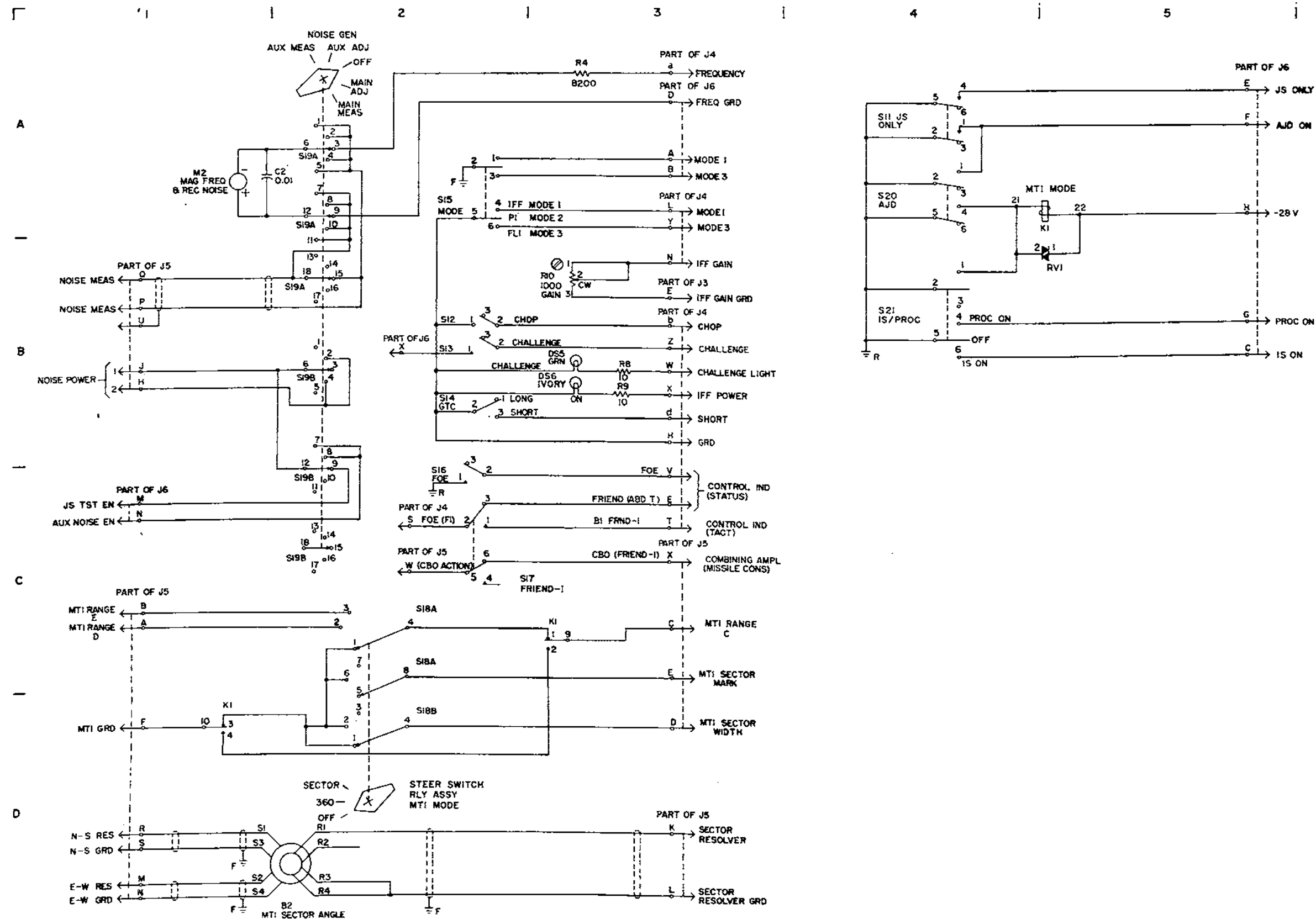
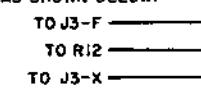


Figure 21.2 (U). Acquisition control-indicator 9988650—schematic diagram (sheet 1 of 2) (U).

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**98.7**

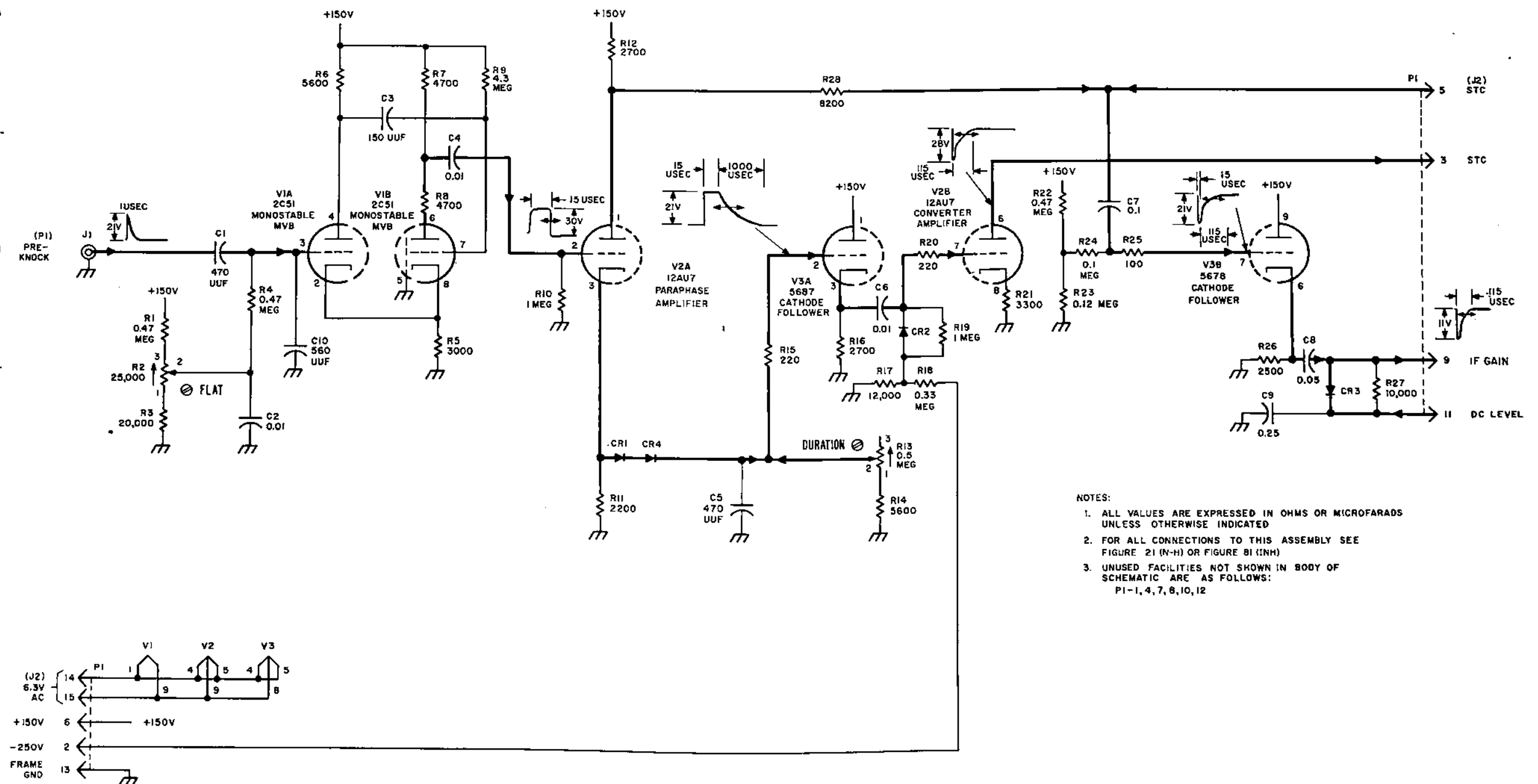
Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
A1					8512082	GS-18105
B1					7674819	
B2					7677411	
C1	0.05	10		600	CP67B1EF503K	
C2	0.01	10		300	DQFX7522119	CM35B103K
DS1					7605718	
DS2					DLAX8,572994	
DS3,DS4					7605718	
DS5 thru DS7					DLAX8,504521	
J1					7599662	
J2					9150422	
J3					9003422	
J4					9003898	
J5					8528011	
J6					9144327	
K1, K2					9009252	
M1					8174004	
M2					8174005	
P1					MS35170	
R1	10,000	10		2	7622579	
R2	2.2 meg	10		1/2	RC20BF225K	
R3	0.1 meg	10		1	9988814	
R4	8200	5		1/2	MS35043-109	RC20GF822J
R8, R9	10	10		1/2	MS35043-1	RC20GF100K
R10	1000	10		2	8012502	
R11	24,000	5		1/2	MS35043-120	RC20GF243J
R12	560	5		18	RW33G561	
RV1					7599075	
S1					8175304	
S2					9000695	
S3					7602825	
S4					9000695	
S5					9001495	
S6					9001465	
S7					8005247	
S9					9001488	
S10					9000695	
S11					9000774	
S12					9001495	
S13					9000695	
S14					9001495	
S15					9001494	
S16					9000695	
S17					9000774	
S18					8512470	
S19					8009648	
S20					9001495	
S21					9001494	
S22						
T1					9157392	
T2					7605333	

A

B

C

D



## NOTES:

1. ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
2. FOR ALL CONNECTIONS TO THIS ASSEMBLY SEE FIGURE 21 (N-H) OR FIGURE 81 (INH)
3. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
P1-1, 4, 7, 8, 10, 12

Figure 22 (U). STC 8512082—schematic diagram.

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STC 8512082—Apparatus List

Reference designation	Ordinance part No.	Part description
C1, C5 .....	MS35007-28	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 470 $\mu$ mf $\pm$ 10%, type CM20B471K
C2, C4, C6 .....	522119	CAPACITOR, FIXED, MICA DIELECTRIC: 300v dc, 0.01 $\mu$ f $\pm$ 10%, type CM35B103K.
C3 .....	522237	CAPACITOR, FIXED, MICA DIELECTRIC: 500v dc, 150 $\mu$ mf $\pm$ 10%, type CM20B151K.
C7 .....	7631632	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.1 $\mu$ f +20% -10%, type CP69B1EF104V.
C8 .....	7602895	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.05 $\mu$ f $\pm$ 10%, type CP26A1EF503K.
C9 .....	7631633	CAPACITOR, FIXED, PAPER DIELECTRIC: 600v dc, 0.25 $\mu$ f +20% -10%, type CP69B1EF254V.
C10 .....	8707732	CAPACITOR, FIXED, MICA, DIELECTRIC: 500v dc, 500 $\mu$ mf $\pm$ 10%, type CM25B561K.
CR1, CR2, CR3, CR4 ....	7598937	SEMICONDUCTOR DEVICE, DIODE: rectifying, germanium; type 1N43.
J1 .....	8581071	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont, type UG625B/U.
P1 .....	7598051	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont.
R1, R4, R22 .....	MS35043-151	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.47 meg $\pm$ 5%, type RC20GF474J.
R2 .....	7599606	RESISTOR, VARIABLE: composition; 2w, 25,000 ohm $\pm$ 10%
R3 .....	MS35043-118	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 20,000 ohm $\pm$ 5%, type RC20GF203J.
R5 .....	MS35044-112	RESISTOR, FIXED, COMPOSITION: 1w, 3,000 ohm $\pm$ 5%, type RC32GF302J.
R6, R14 .....	MS35043-208	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 5,600 ohm $\pm$ 10%, type RC20GF562K.
R7, R8 .....	MS35044-17	RESISTOR, FIXED, COMPOSITION: 1w, 4,700 ohm $\pm$ 10%, type RC32GF472K.

STC 8512082—Apparatus List—Continued

Reference designation	Ordinance part No.	Part description
R9 .....	MS35043-174	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 4.3 meg $\pm$ 5%, type RC20GF435J.
R10, R19 .....	MS35043-31	RESISTOR, FIXED, COMPOSITION; $\frac{1}{2}$ w, 1 meg $\pm$ 10%, type RC20GF105K
R11 .....	MS35043-15	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2,200 ohm $\pm$ 10%, type RC20GF222K
R12, R16 .....	MS35043-97	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 2,700 ohm $\pm$ 5%, type RC20GF272J
R13 .....	7599324	RESISTOR, VARIABLE: composition; 2w, 0.5 meg $\pm$ 10%
R15, R20 .....	MS35043-9	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 220 ohm $\pm$ 10%, RC20GF221K
R17 .....	MS35043-113	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 12,000 ohm $\pm$ 5%, type RC20GF123J
R18 .....	MS35043-147	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.33 meg $\pm$ 5%, type RC20GF334J
R21 .....	MS34043-16	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 3,300 ohm $\pm$ 10%, type RC20GF332K
R23 .....	MS35043-137	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.12 meg $\pm$ 5%, type RC20GF124J
R24 .....	MS35043-25	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 0.1 meg $\pm$ 10%, type RC20GF104K
R25 .....	MS35043-7	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 100 ohm $\pm$ 10%, type RC20GF101K
R26 .....	522684	RESISTOR, FIXED, WIRE WOUND: power type, tubr, tab terms; 12w, 2,500 ohm, type RW32G252.
R27 .....	MS35043-19	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 10,000 ohm $\pm$ 10%, type RC20GF103K
R28 .....	MS35043-109	RESISTOR, FIXED, COMPOSITION: $\frac{1}{2}$ w, 8,200 ohm $\pm$ 5%, type RC20GF822J
V1 .....	7599316	ELECTRON TUBE: type 2C51
V2 .....	7599317	ELECTRON TUBE: type 12AU7
V3 .....	7599315	ELECTRON TUBE: type 5687

## MEASUREMENT NOTES

## 1. General

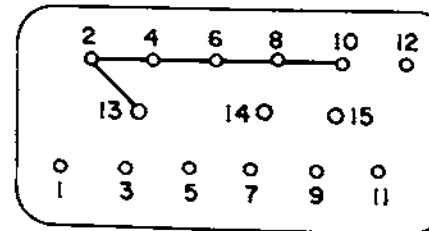
- Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- Notation 1 to 9 in the Pin column indicates that measurement is made between pins 1 and 9; notation 4, 5 to 9 indicates that measurement is made between pin 4 and pin 9 or pin 5 and pin 9.
- All values given are typical.

## 2. Voltage

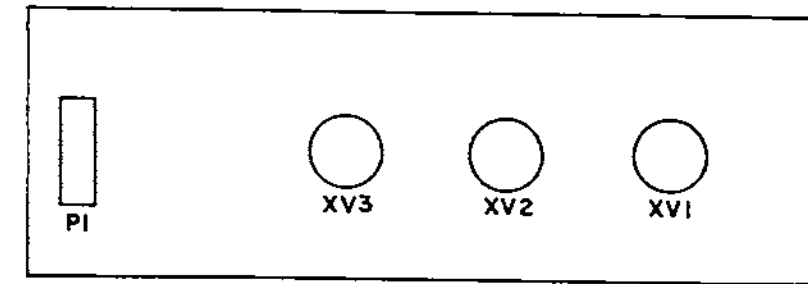
- Measurements are made with system energized through low voltage condition, and with cable removed from J1.
- Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- Voltages are +dc measured to ground, unless otherwise indicated.

## 3. Resistance

- Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- Measurements are made with all external cables disconnected and connector P1 strapped as indicated.
- Resistances are measured to ground unless otherwise indicated.
- A dash in the Ohms column indicates a resistance in excess of 10 megohms.



PIN STRAPPING ARRANGEMENT FOR P1



BOTTOM VIEW OF CHASSIS

Ref design		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1A	2C51	Monostable multivibrator	4	150	5,600							3	10	500,000	2	21	3,000	1 to 9	6.3 ac	<1
	V1B			6	91	9,400							7	21	4.3 meg	8	21	3,000			
XV2	V2A	12AU7	Paraphase amplifier	1	145	2,700							2	0	1 meg	3	6.8	2,200	4, 5 to 9	6.3 ac	<1
	V2B		Converter amplifier	6	150	—							7	-9.5	16,000Δ	8	0.7	3,300			
XV3	V3A	5687	Cathode follower	1	150	0							2	6.8	4,200Δ	3	14	2,700	4, 5 to 8	6.3 ac	<1
	V3B			9	150	0							7	32	196,000	6	36	2,500			

&lt; Less than. Δ Reverse meter leads if reading is not obtained.

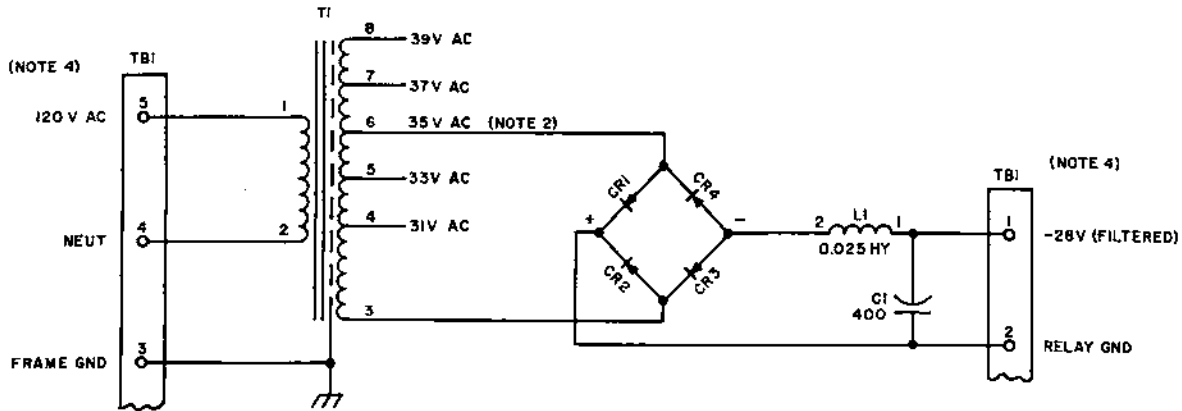
RA PD 417730

Figure 22A (U). STC 8512082—voltage and resistance chart.

NOTES:

- 1. ALL VALUES ARE EXPRESSED IN MICRO-FARADS UNLESS OTHERWISE INDICATED
- 2. CONNECTION TO THE SECONDARY OF T1 IS MADE TO GIVE AN OUTPUT OF -27V±1V AT 4 AMPS
- 3. UNUSED FACILITY NOT SHOWN IN BODY OF SCHEMATIC IS AS FOLLOWS:  
TBI-6
- 4. THIS ASSEMBLY IS A MULTIPLE-USE ITEM. MATING CONNECTORS ARE SHOWN IN TABLE

CONNECTOR	MATING CONNECTOR			
	TM9-1430-257-20/1 (FIG. 3 N-H) OR (FIG. 71 INH)	TM9-1430-259-20 (FIG. 88 N-H) OR (FIG. 178 INH)	(FIG. 145 INH)	(FIG. 200 INH)
TBI-1	TERM. 152	F49A	TERM. 420	TERM. 119
TBI-2	TERM. 156	TERM. 198	TERM. 417	TERM. 218
TBI-3	P24-J	J16-1	TERM. 435	TERM. 146
TBI-4	TERM. 72	J16-15	TERM. 482	TERM. 93
TBI-5	TERM. 71	TERM. 48	TERM. 470	TERM. 92



-28v Power Supply 8512751 or 9986424—Apparatus List

Reference designation	Ordinance part No.	Part description
C1 .....	8243018	CAPACITOR, FIXED, ELECTROLYTIC: 100v dc, 400 μf +150% -100%, type CE41C401H.
CR1, CR2, CR3, CR4	9003670	SEMICONDUCTOR DEVICE, DIODE: rectifying, silicon; type 1N250.
L1 .....	8010480	REACTOR: filter choke; 0.025 hy at 7 amp, 0.38 ohm
T1 .....	8024244	TRANSFORMER, POWER, STEP-DOWN: sgle; input, 120v, 400 cps, 1 output wnd, 39v at 3.0 amp or 38.5v at 6 amp.
TB1 .....	8175852	TERMINAL BOARD: plastic, 6 sgle-ended solder lub term.

ORD G57429

Figure 28 (U). -28v power supply 8512751 or 9986424—schematic diagram.



(U) Gong Control Relay Assembly 8012372—Apparatus List

Reference designation	Ordnance part no.	Part description
CR1	7599075	RESISTOR, VOLTAGE SENSITIVE: 21v dc min, 32 dc max reqd to pass 5 ma
K1, K2, K3	7605357	RELAY, ARMATURE: 3 pdt, 1 amp ac or dc, coil 42 ma, 425 ohm
P1	7598934	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont

- NOTES:
- ALL VALUES ARE EXPRESSED IN OHMS UNLESS OTHERWISE INDICATED
  - FOR ALL CONNECTIONS TO THIS ASSEMBLY SEE FIGURE 3 (N-H) OR FIGURE 7 (INH)
  - UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
K1-1T, 2T, 3T, 4T  
K2-1T, 2T  
K3-1T, 2T, 3T, 4T  
CR1-10, 11  
P1-1, 2, 3, 5, 7, 9, 11, 12
  - FOR FUNCTIONAL REFERENCE SEE FIGURE 33, TM 9-1430-254-20

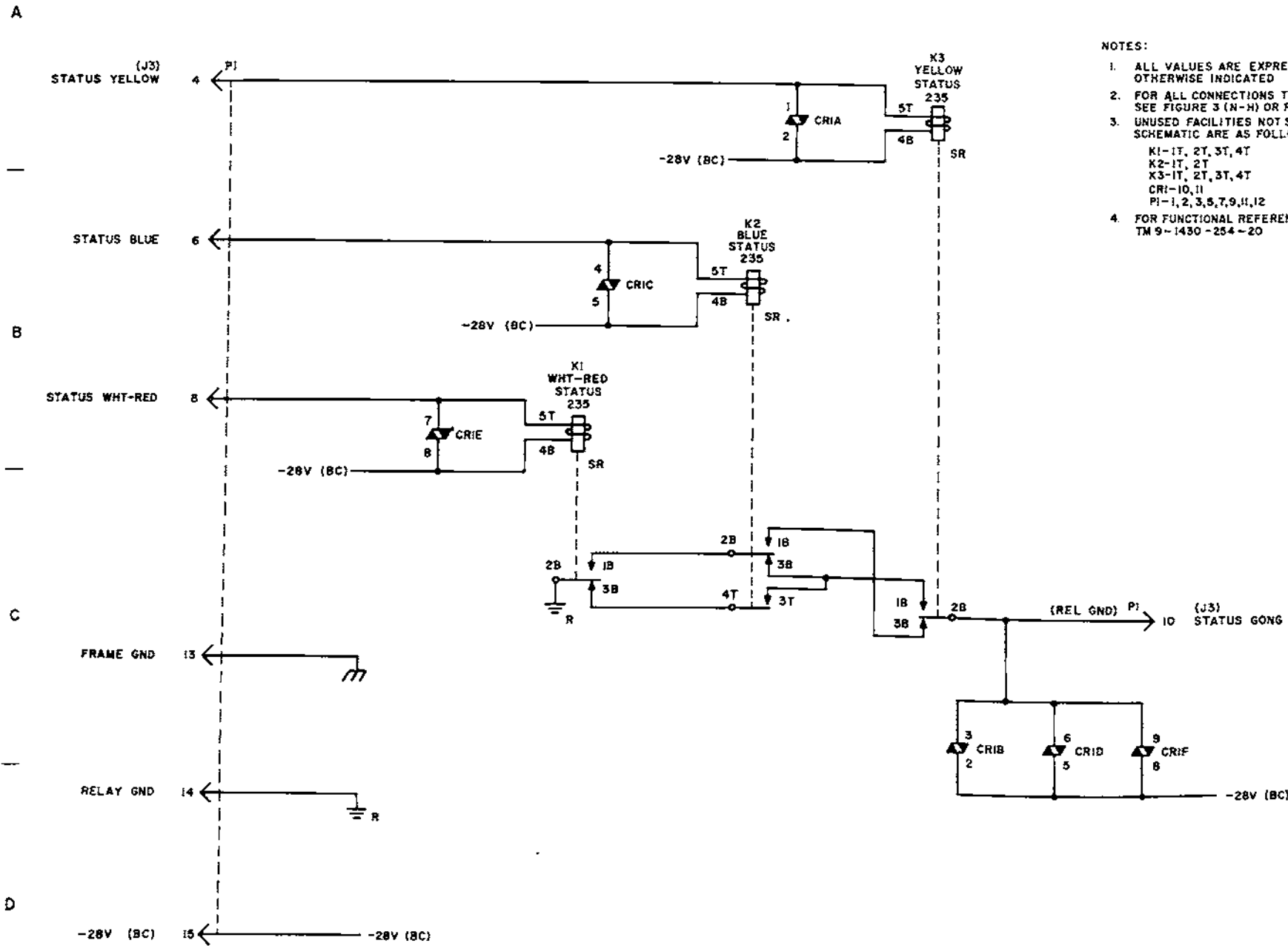
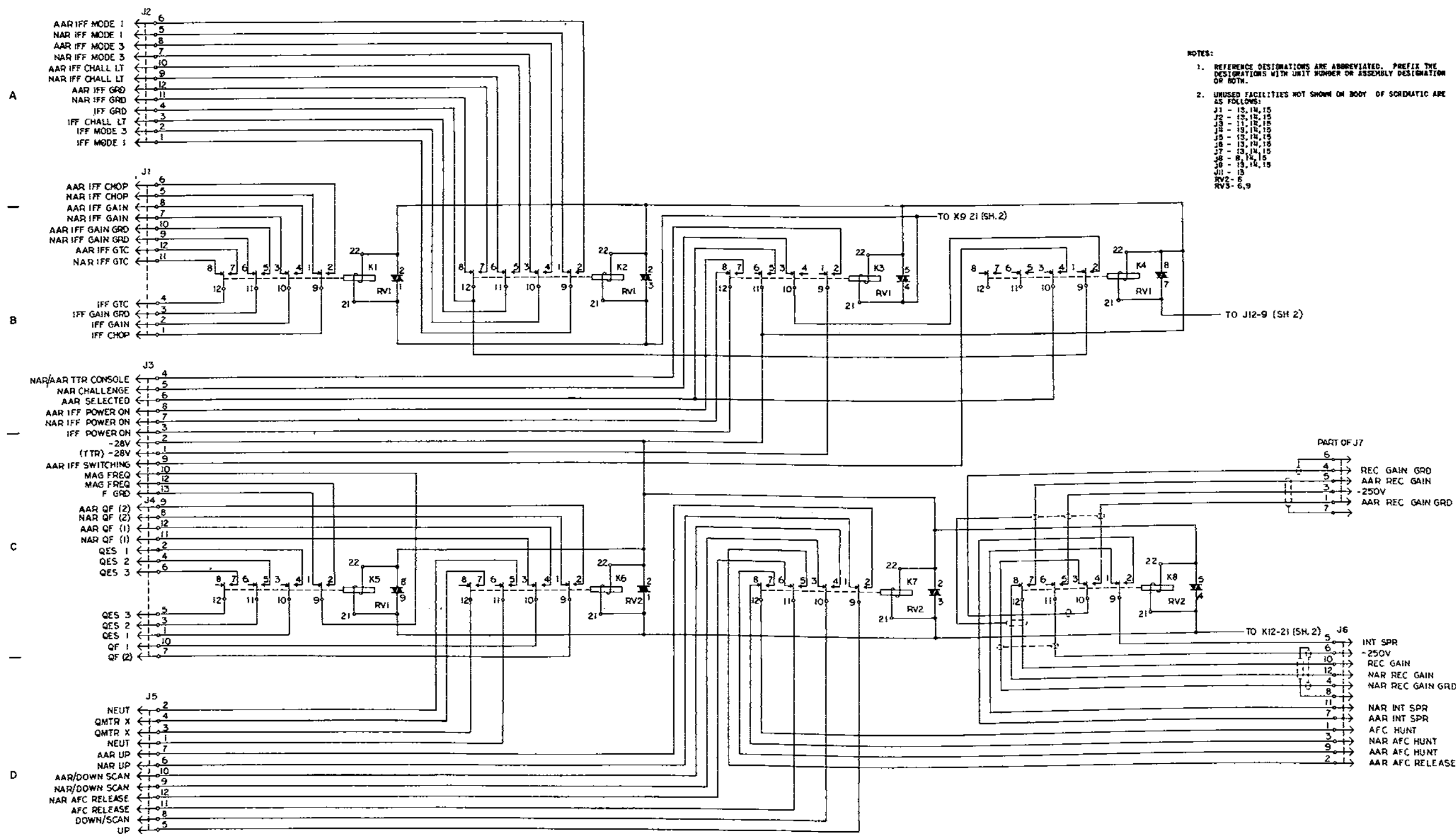


Figure 24 (U). Gong control relay assembly 8012372—schematic diagram.

ORD G57425



ORD G82576

Figure 24.1 (U). Auxiliary acquisition relay assembly 9985525—schematic diagram (sheet 1 of 2).

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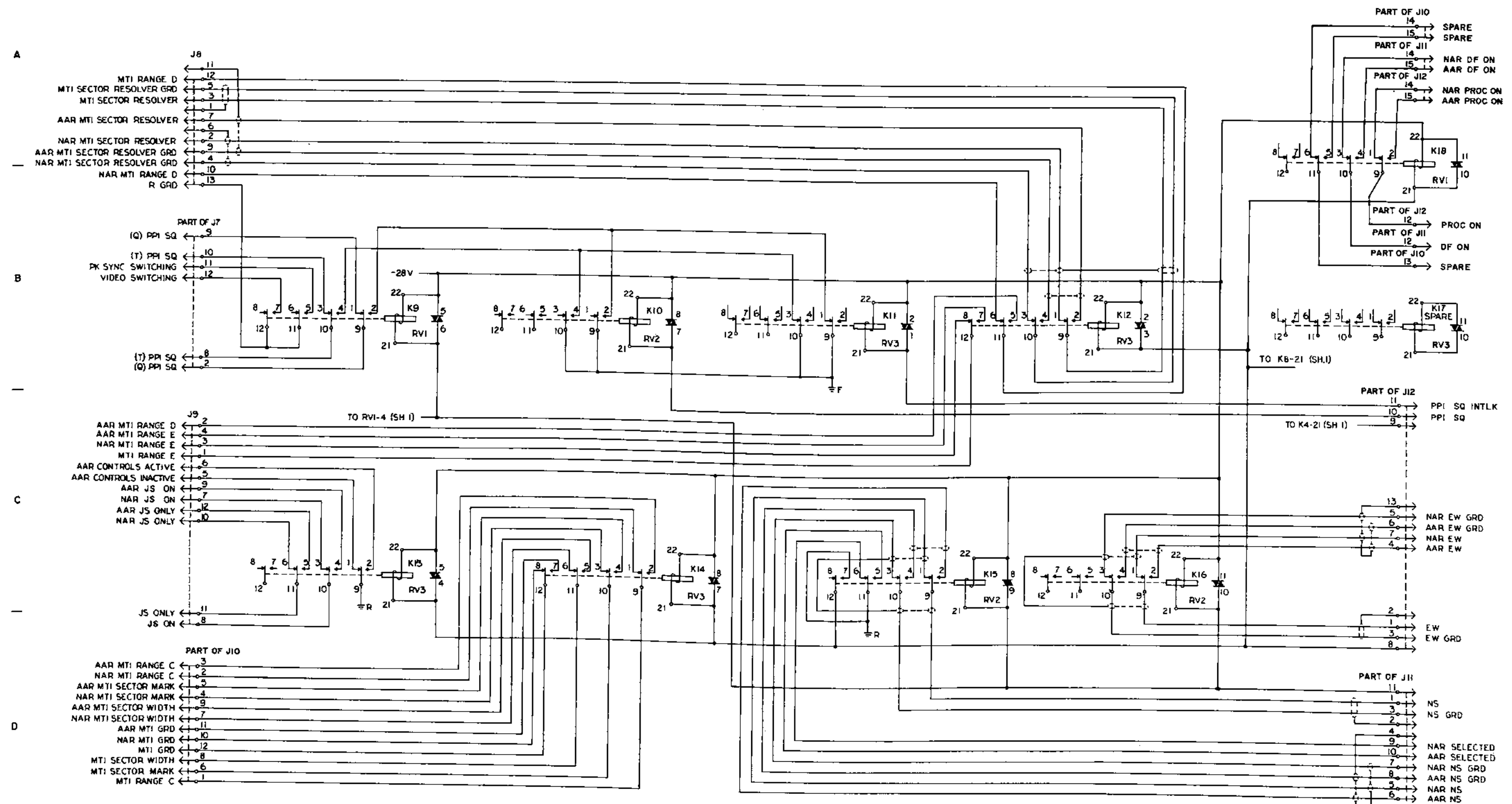


Figure 24.1 (U). Continued (sheet 2 of 2).

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(U) Auxiliary Acquisition Relay Assembly 9985525—Apparatus List

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
J1 thru J12					9150421	
K1 thru K18					9009252	
RV1 RV2 RV3					7599075	

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Section III (CMHA). DIRECTOR STATION GROUP

C9

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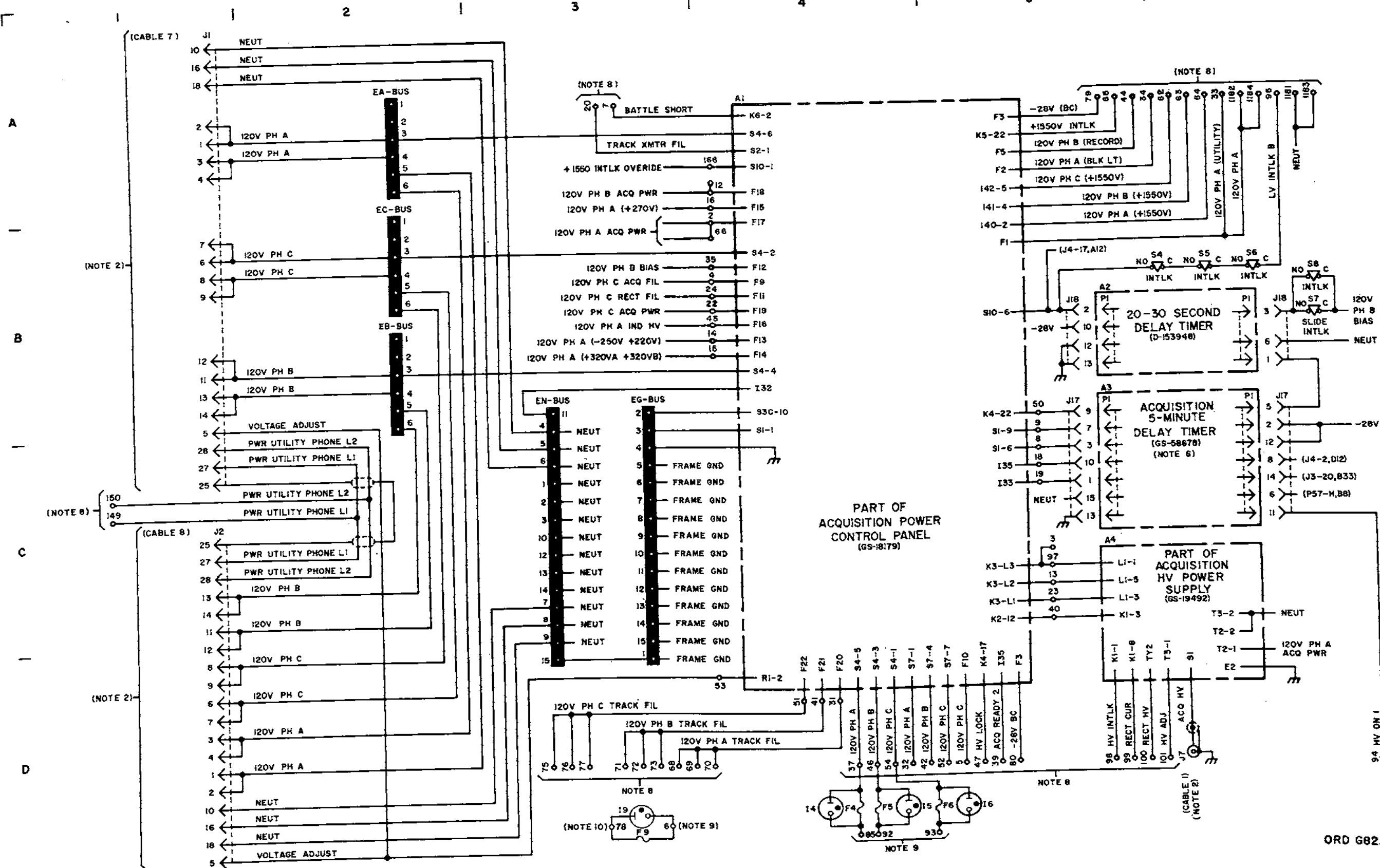


Figure 25 (U). Director station group 8513626—schematic diagram (sheet 1 of 7).

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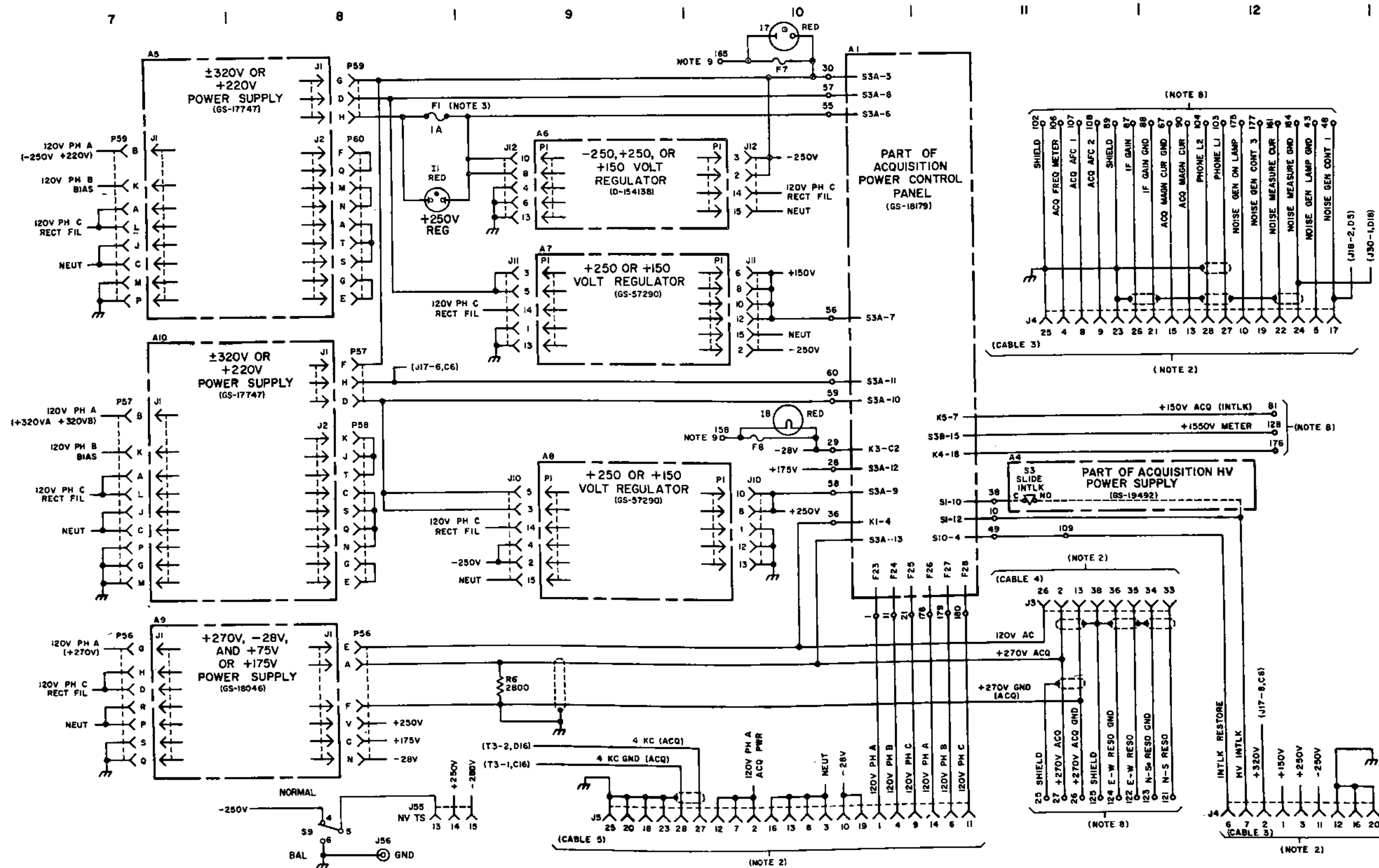


Figure 25 (U). Continued (sheet 2 of 7).

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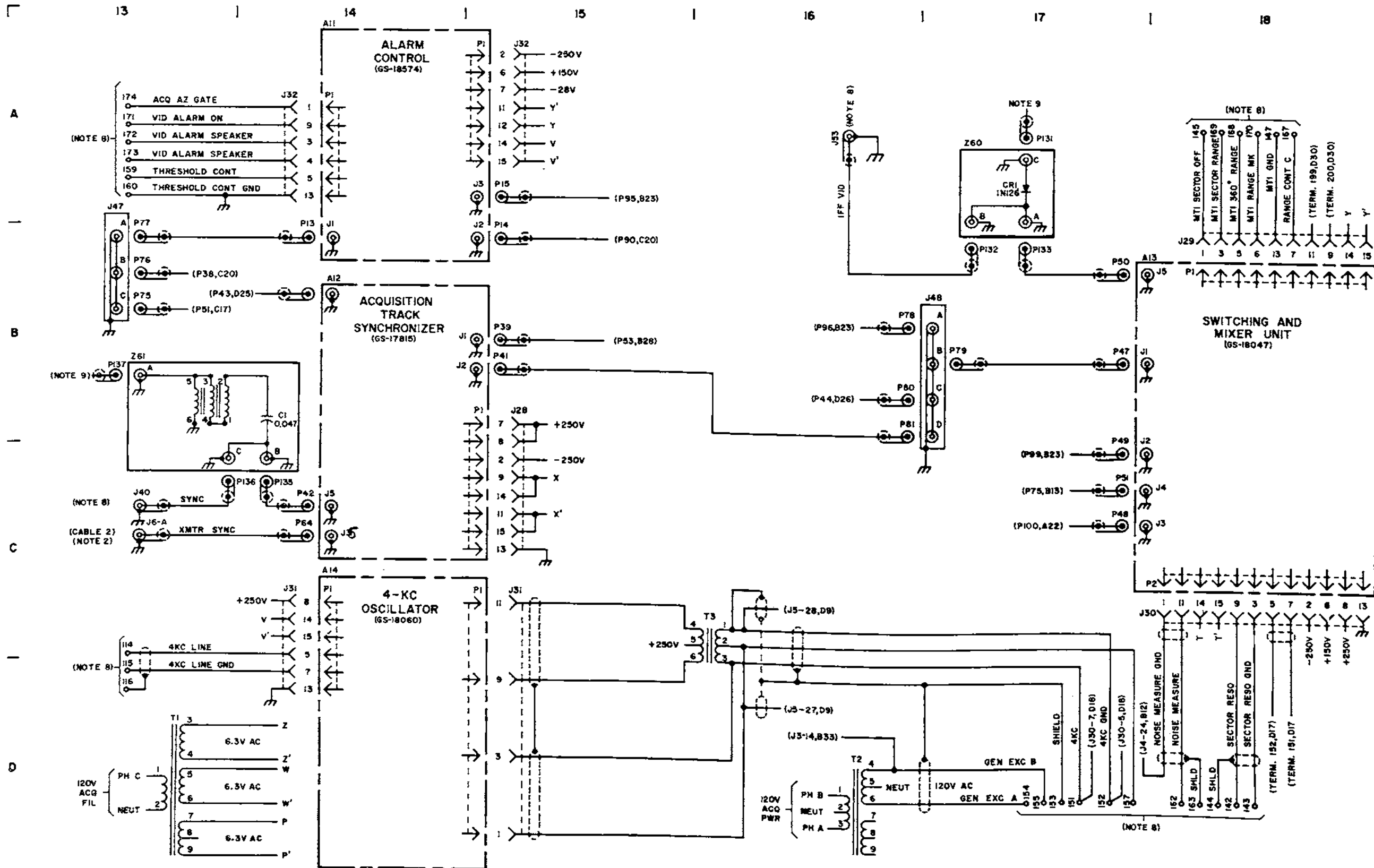


Figure 25 (U). Continued (sheet 8 of 7).

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82293

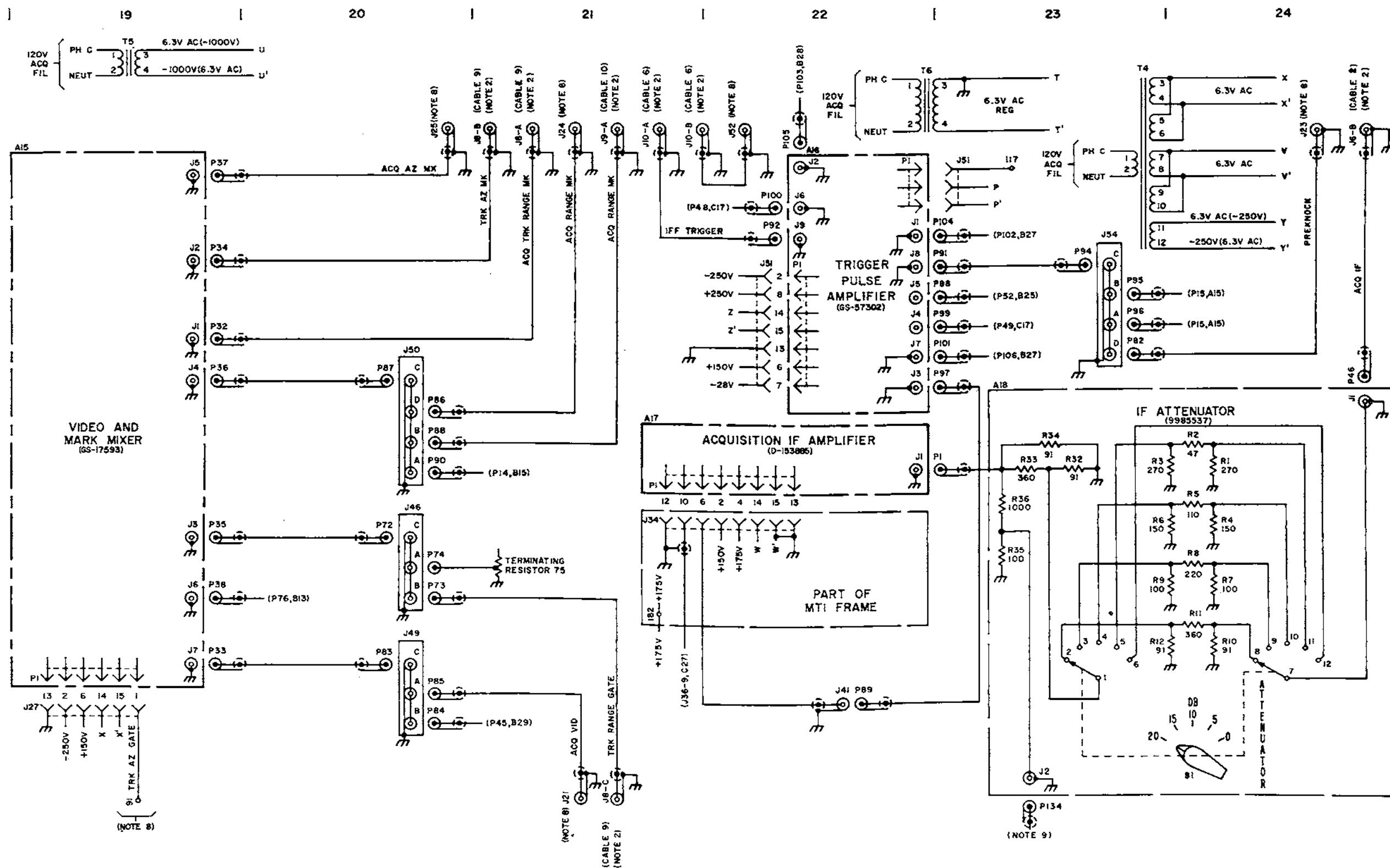


Figure 25 (U). Continued (sheet 4 of 7).



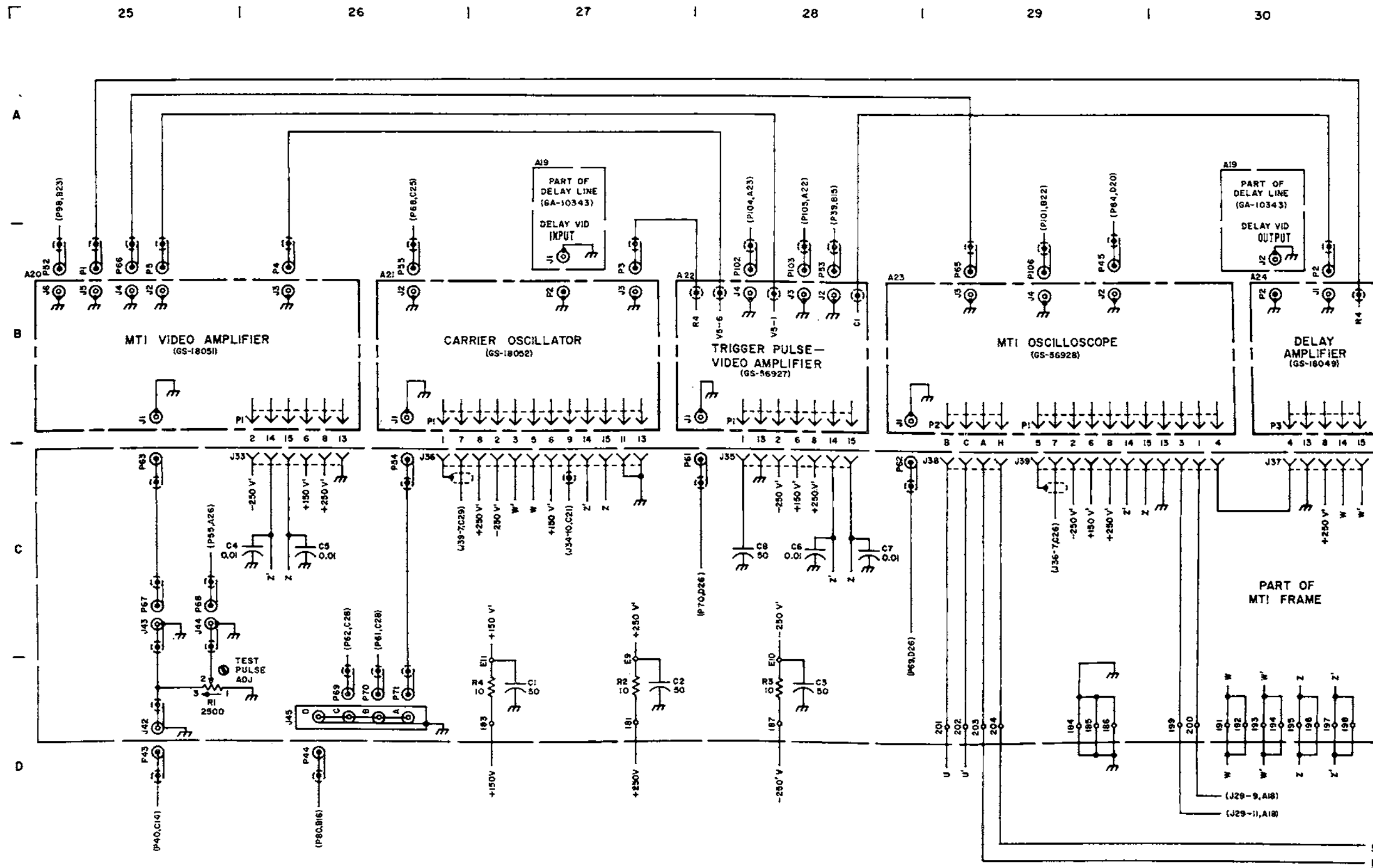
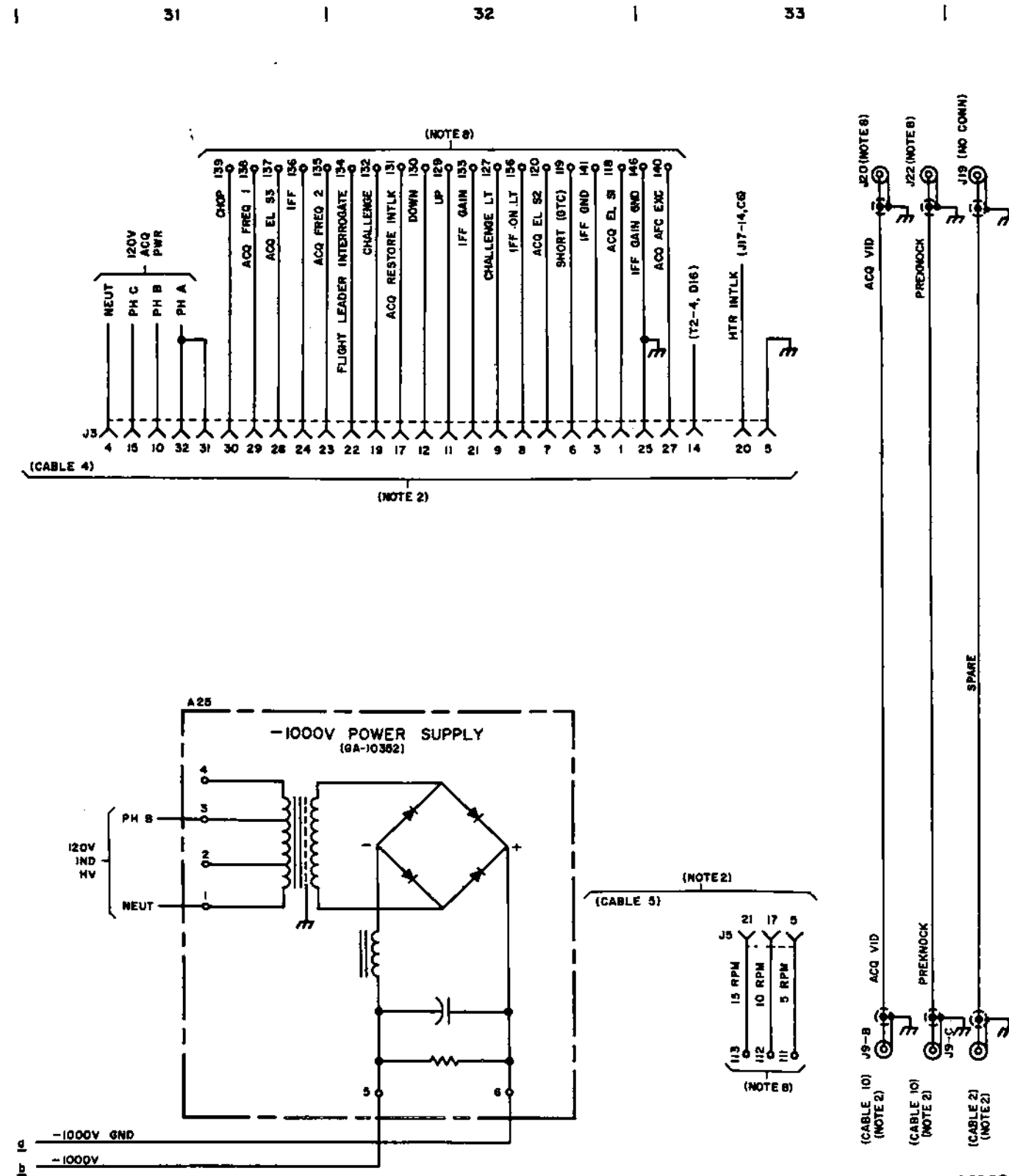


Figure 25 (U). Continued (sheet 5 of 7).



INDEX OF TERMINALS (Fig. 25)

TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C10	46	D4	91	D19	136	A81	181	D27
2	B4	47	D5	92	No Conn	137	A31	182	C21
3	C5	48	A12	93	No Conn	138	A31	183	D27
4	B4	49	C11	94	D6	139	A31	184	D29
5	D5	50	C5	95	A6	140	A33	185	D29
6	D4	51	D4	96	A4	141	A32	186	D29
7	A3	52	D5	97	C5	142	D18	187	D28
8	C5	53	D4	98	D5	143	D18	188	No Conn
9	C5	54	D4	99	D5	144	D18	189	No Conn
10	C11	55	A10	100	D6	145	A18	190	No Conn
11	C10	56	B10	101	D6	146	A33	191	D30
12	A4	57	A10	102	A11	147	A18	192	D30
13	C5	58	C10	103	A12	148	No Conn	193	D30
14	B4	59	B10	104	A12	149	C1	194	D30
15	B4	60	B10	105	No Conn	150	C1	195	D30
16	A4	61	No Conn	106	A11	151	D17	196	D30
17	No Conn	62	A6	107	A11	152	D17	197	D30
18	C5	63	A6	108	A11	153	D17	198	D30
19	C5	64	A6	109	C11	154	D17	199	D30
20	A3	65	A5	110	No Conn	155	D17	200	D30
21	C10	66	B4	111	D33	156	A32	201	D29
22	B4	67	A12	112	D33	157	D17	202	D29
23	C5	68	D3	113	D33	158	No Conn	203	D29
24	B4	69	D3	114	C13	159	A13	204	D29
25	D11	70	D4	115	D13	160	A13	1181	A6
26	D11	71	D3	116	D13	161	A12	1182	A6
27	D11	72	D3	117	A33	162	D18	1183	A6
28	C10	73	D3	118	A32	163	D18	1184	A6
29	C10	74	No Conn	119	A32	164	A12		
30	A10	75	D3	120	A32	165	No Conn		
31	D4	76	D3	121	D12	166	A4		
32	D4	77	D3	122	D11	167	A18		
33	A6	78	D3	123	D11	168	A18		
34	A6	79	A5	124	D11	169	A18		
35	B4	80	D5	125	D11	170	A18		
36	C10	81	B12	126	No Conn	171	A13		
37	D4	82	No Conn	127	A32	172	A13		
38	C11	83	No Conn	128	C12	173	A13		
39	D5	84	No Conn	129	A32	174	A13		
40	C5	85	No Conn	130	A32	175	A12		
41	D4	86	No Conn	131	A32	176	C12		
42	D4	87	A11	132	A32	177	A12		
43	A12	88	A12	133	A32	178	C11		
44	A5	89	A11	134	A32	179	C11		
45	B4	90	A12	135	A31	180	C11		

Figure 25 (U). Continued (sheet 8 of 7).



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Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
A1					8513518	GS-18179
A2					7620519	D-153948
A3					9142969	GS-58678
A4					9138109	GS-19492
A5					9140697	GS-17747
A6					7620552	D-154138
A7					9137641	GS-57290
A8					9137641	GS-57290
A9					8019210	GS-18046
A10					9140697	GS-17747
A11					8158475	GS-18574
A12					9142937	GS-17815
A13					8513387	GS-18047
A14					8512062	GS-18060
A15					9142873	GS-17593
A16					9160170	GS-57302
A17					7621810	D-153885
A18					9985537	
R1	270		5	1/2	MS35043-73	
R2	47		5	1/2	MS35043-55	
R3	270		5	1/2	MS35043-73	
R4	150		5	1/2	MS35043-67	
R5	110		5	1/2	MS35043-64	
R6	150		5	1/2	MS35043-67	
R7	100		5	1/2	MS35043-63	
R8	220		5	1/2	MS35043-71	
R9	100		5	1/2	MS35043-63	
R10	91		5	1/2	MS35043-62	
R11	360		5	1/2	MS35043-76	
R12	91		5	1/2	MS35043-62	
R32	91	5	1/2		MS35043-62	
R33	360	5	1/2		MS35043-76	
R34	91	5	1/2		MS35043-62	
R35	100	5	1/2		MS35043-63	
R36	1000	5	1/2		MS35043-87	
A19					8519066	GA-10343
A20					8513331	GS-18051
A21					8513287	GS-18052
A22					9137927	GS-56927
A23					9137928	GS-56928
A24					9007731	GS-18049
A25					8519068	GA-10352
C1	50 UF	+50-10		400	8519269	
C2	50 UF	+50-10		400	8519269	
C3	50 UF	+50-10		400	8519269	
C4	0.01 UF	10		400	9000751	
C5	0.01 UF	10		400	9000751	
C6	0.01 UF	10		400	9000751	
C7	0.01 UF	10		400	9000751	
C8	50 UF	+50-10		400	8519269	
EA					8009011	
EB					8009011	
EC					8009011	
F1	1 AMP				MS90082-1	
F4	0.5 AMP				432642	
F5	0.5 AMP				432642	

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
F6	0.5 AMP				432642	
F7	1/16 AMP				MS90078-18	
F8	0.5 AMP				432642	
F9	3.2 AMP				9007312	
I1					7605718	
J1					7632526	
J2					7632526	
J3					7632529	
J4					7632527	
J5					7632527	
J6					7606490	
J7					9000848	
J8					7606490	
J9					7606490	
J10					7599367	
J11					7599367	
J12					7599367	
J17					7599367	
J18					7599662	
J19					7599662	
J20					7599662	
J21					7599662	
J22					7599662	
J23					7599662	
J24					7599662	
J25					7599662	
J26					7599662	
J27					7599367	
J28					7599367	
J29					7599367	
J30					7599367	
J31					7599367	
J32					7599367	
J33					7599367	
J34					7599367	
J35					7599367	
J36					7599367	
J37					7599367	
J38					8519237	
J39					7599367	
J40					7599662	
J41					8531071	
J42					8531071	
J43					8531071	
J44					8531071	
J45					9003874	
J46					8519232	
J47					8519232	
J48					9142989	
J49					8519232	
J50					9003874	
J51					7599367	
J52					7599662	
J53					7599662	
J54					9142998	
J55					7593665	

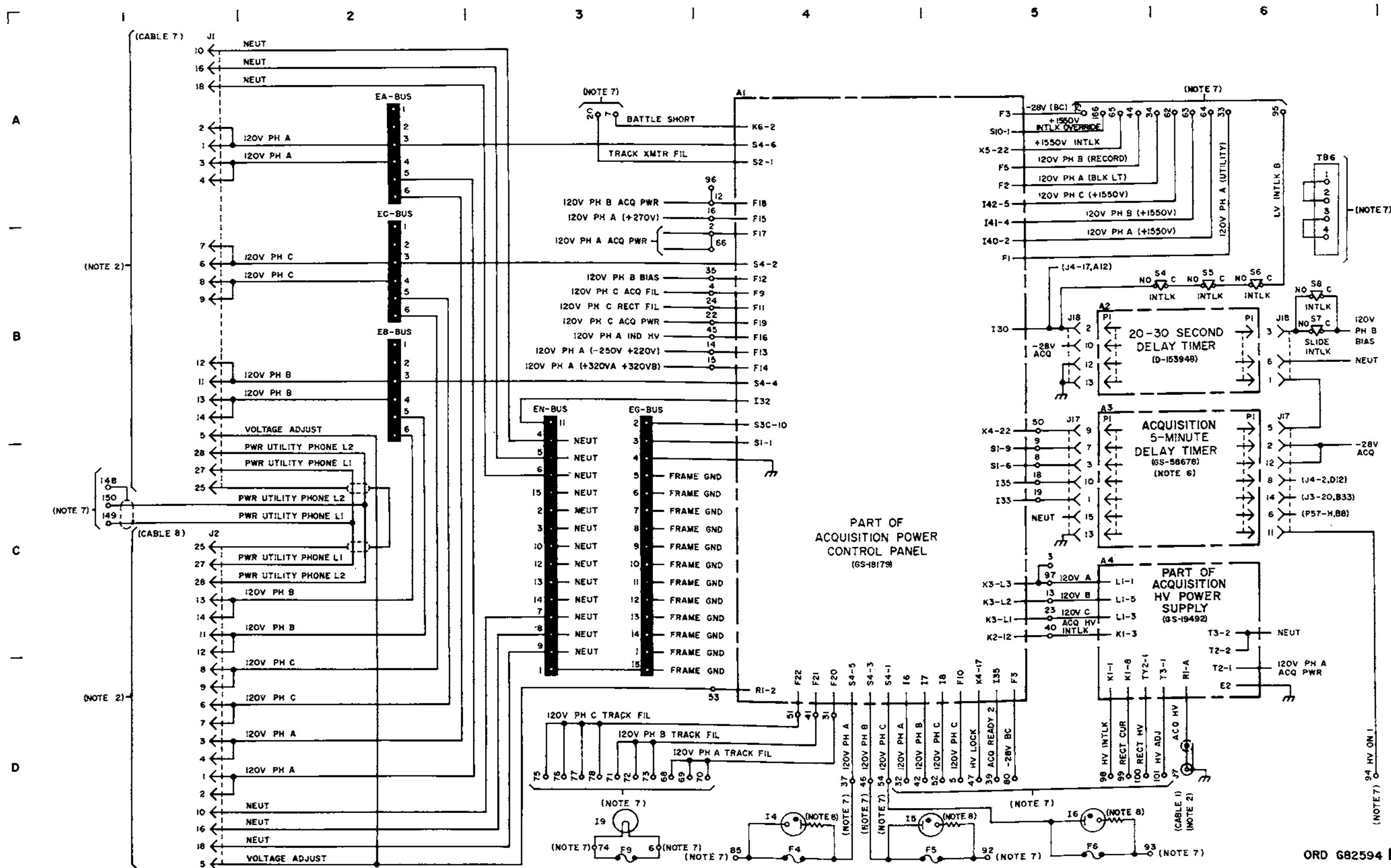
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(U) Director Station Group 8513626—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
J56					8175215	
J57					7599662	
J58					7599662	
J59					7599662	
P13					8177072	
P14					8177072	
P15					MS35170	
P32					8177072	
thru						
P55					8177072	
P56					7602231	
P57					7605635	
P58					7611376	
P59					7605635	
P60					7611377	
P61					8177072	
thru						
P73					8177072	
P74					7601757	
P75					8177072	
thru						
P90					8177072	
P91					MS35170	
P92					MS35170	
P94					MS35170	
P95					MS35170	
P96					8177072	
P97					MS35170	
thru						
P106					MS35170	

(U) Director Station Group 8513626—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
P132					MS35170	
P133					MS35170	
P135					MS35170	
P136					MS35170	
P138					MS35170	
P139					MS35170	
P140					MS35170	
R1	2500	10	2		8175592	
R2	10	5	2		MS35045-39	
R3	10	5	2		MS35045-39	
R4	10	5	2		MS35045-39	
R6	2800	5	37		9000824	
S4					7602749	
S5					7602749	
S6					7602749	
S7					8017760	
S8					7602749	
S9					MS25100	
T1					7605345	
T2					8011006	
T3					7605549	
T4					8519069	
T5					8519067	
T6					8015382	
TB1					7634156	
TB2					7634159	
Z60					9013067	
Z61					9008118	



■ Figure 25.1 (U). Director station group 8513626—schematic diagram (with auxiliary acquisition radar modification) (sheet 1 of 7).

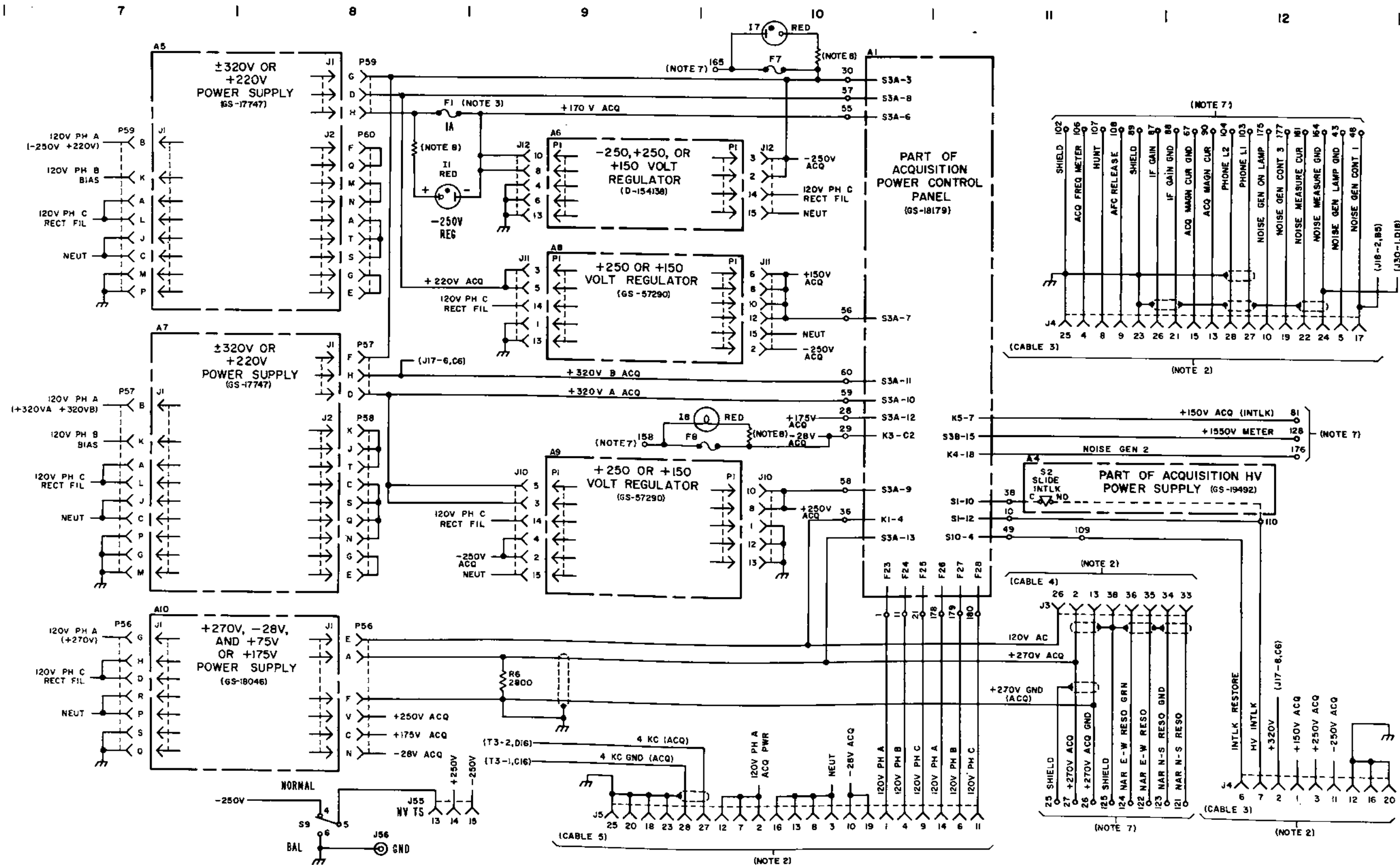


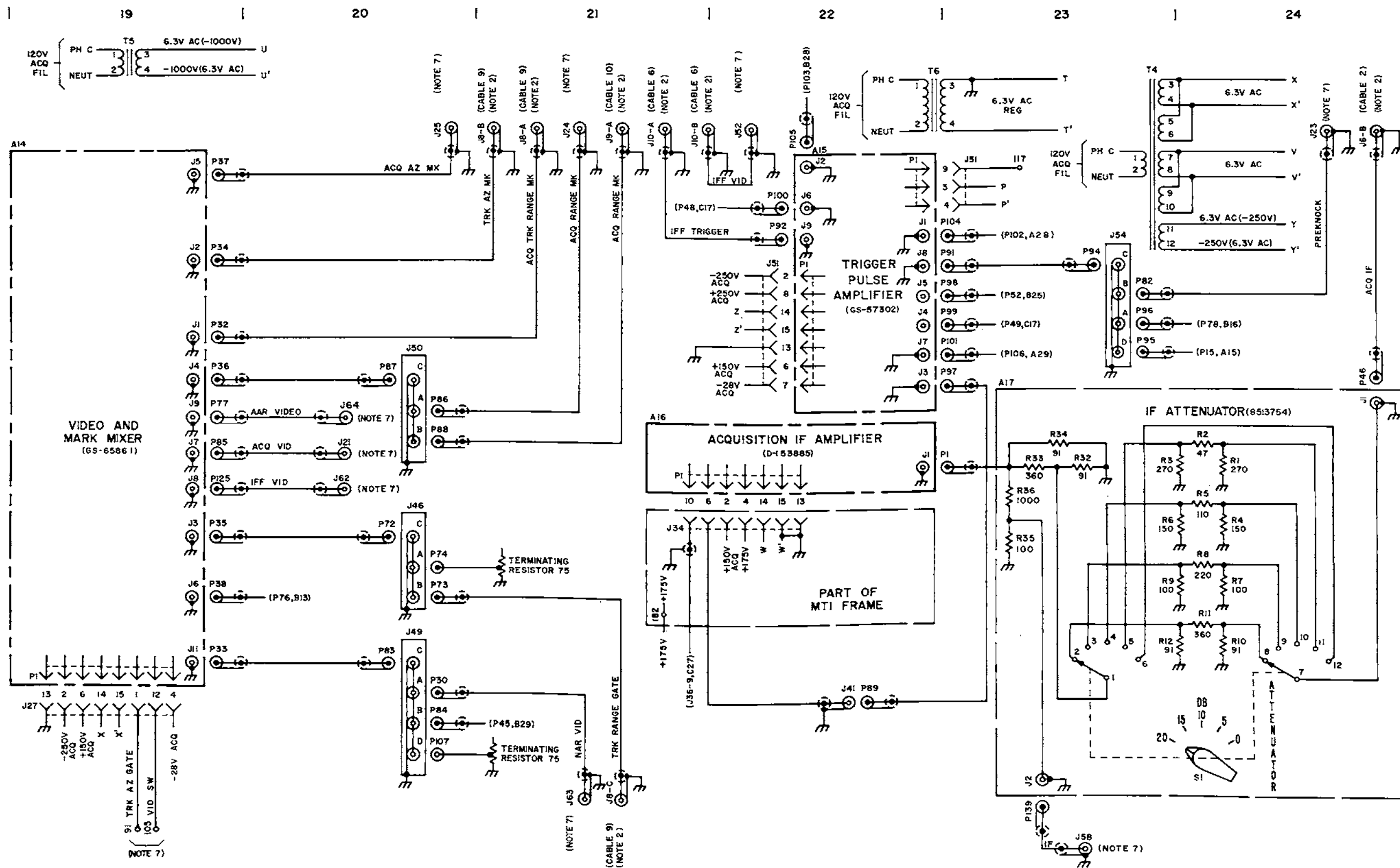
Figure 25.1 (U). Continued (sheet 2 of 7).

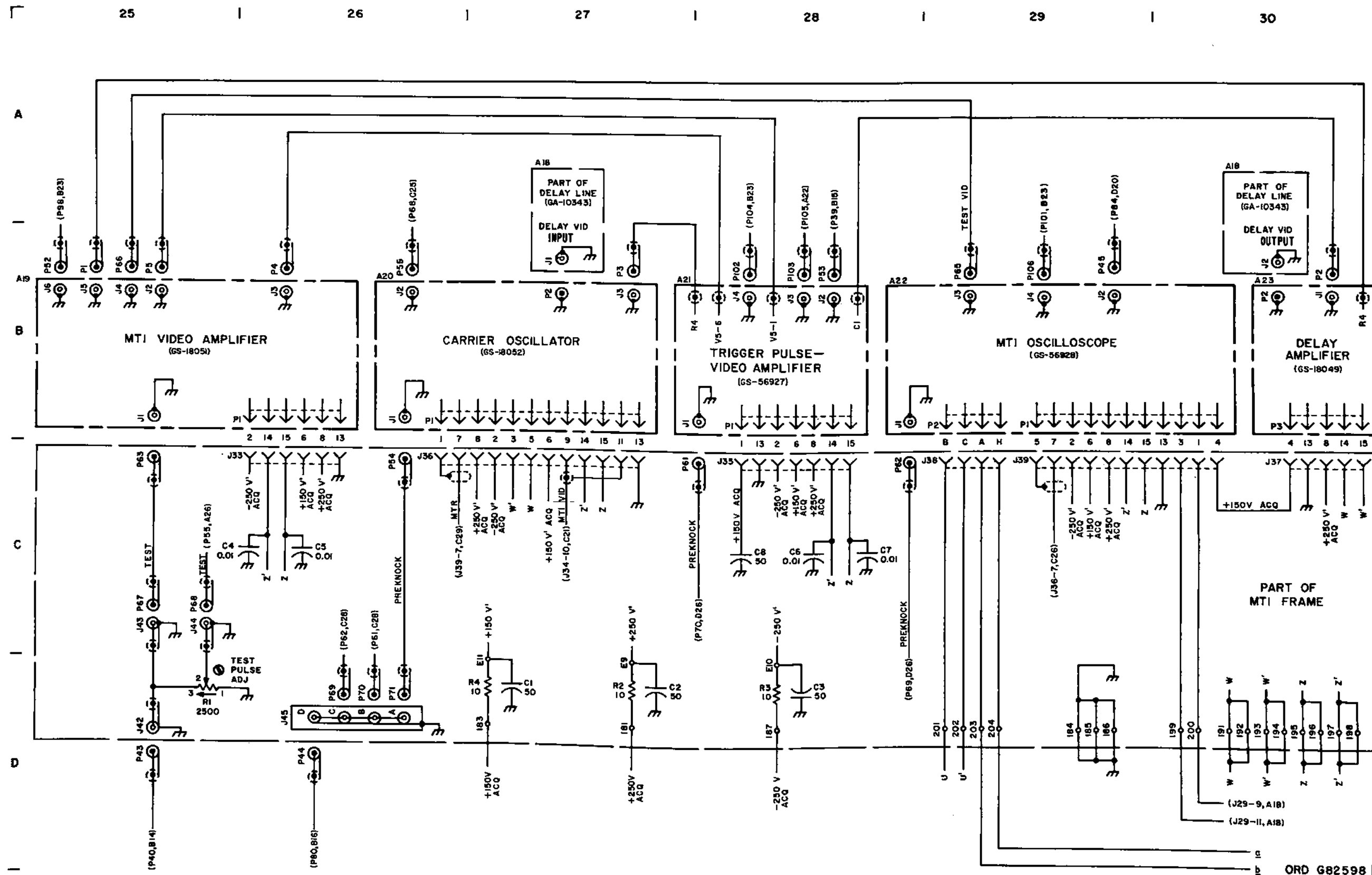
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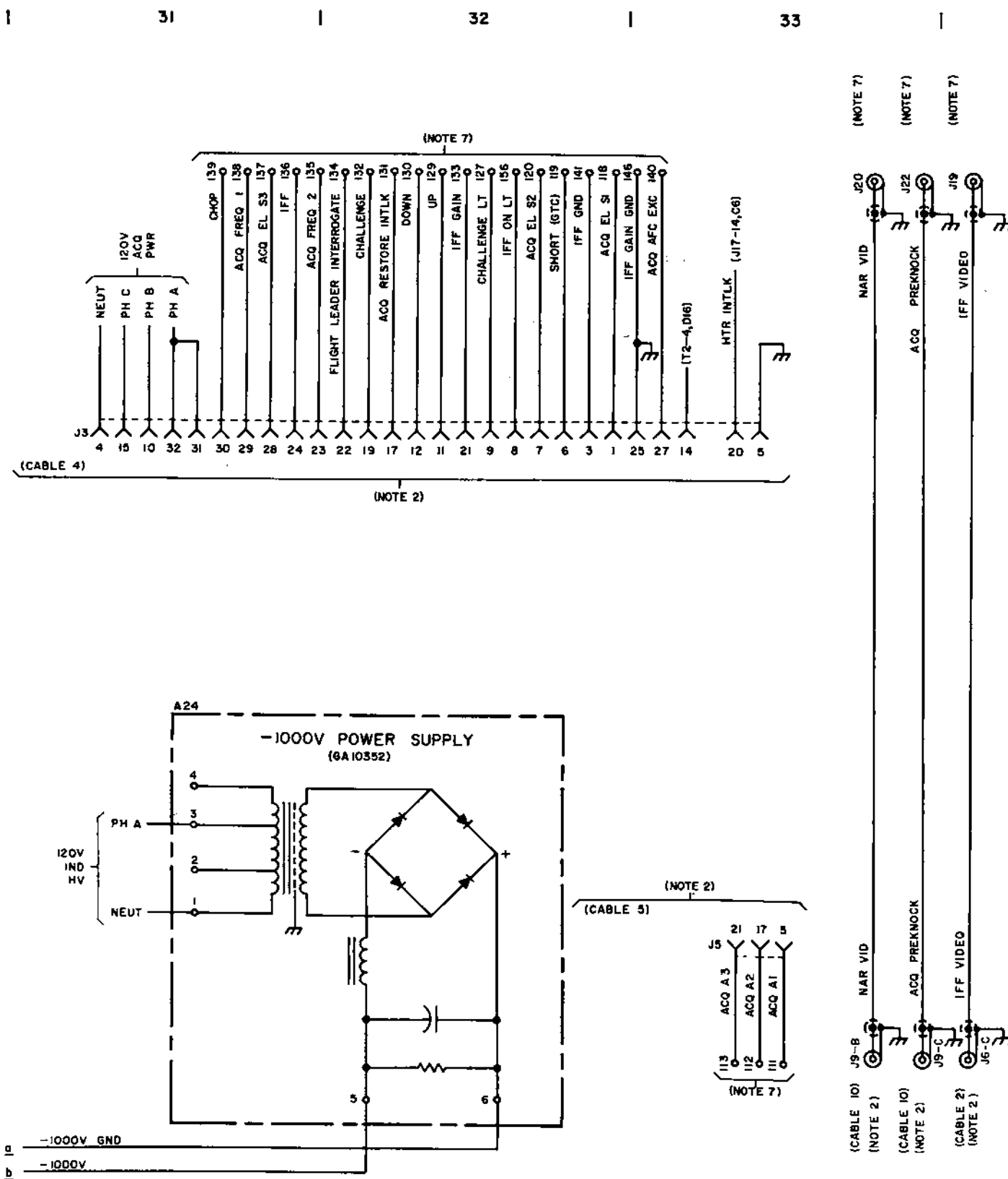
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INDEX OF TERMINALS									
TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION	TERMINAL	LOCATION
1	C10	46	D4	91	D19	136	A31	181	D27
2	B4	47	D5	92	D5	137	A31	182	C21
3	C5	48	A12	93	D6	138	A31	183	D27
4	B4	49	C11	94	D6	139	A31	184	D29
5	D5	50	C5	95	A6	140	A33	185	D29
6	D3	51	D4	96	A4	141	A32	186	D29
7	A3	52	D5	97	C5	142	D18	187	D28
8	C5	53	D4	98	D5	143	D18	187	NO CONN
9	C5	54	D4	99	D5	144	D18	189	NO CONN
10	C11	55	A10	100	D6	145	A18	190	NO CONN
11	C10	56	B10	101	D6	146	A33	191	D30
12	A4	57	A10	102	A11	147	A18	192	D30
13	C5	58	C10	103	A12	148	C1	193	D30
14	B4	59	B10	104	A12	149	C1	194	D30
15	B4	60	B10	105	D19	150	C1	195	D30
16	A4	61	NO CONN	106	A11	151	D17	196	D30
17	NO CONN	62	A6	107	A11	152	D17	197	D30
18	C5	63	A6	108	A11	153	D17	198	D30
19	C5	64	A6	109	C11	154	D17	199	D30
20	A3	65	A5	110	C12	155	D17	200	D30
21	C10	66	B4	111	D33	156	A32	201	D29
22	B4	67	A12	112	D33	157	C16	202	D29
23	C5	68	D3	113	D33	158	B9	203	D29
24	B4	69	D3	114	C13	159	NO CONN	204	D29
25	D11	70	D4	115	D13	160	NO CONN		
26	D11	71	D3	116	D13	161	A12		
27	D11	72	D3	117	A23	162	D18		
28	C10	73	D3	118	A32	163	D18		
29	C10	74	NO CONN	119	A32	164	A12		
30	A10	75	D3	120	A32	165	A10		
31	D4	76	D3	121	D12	166	A5		
32	D4	77	D3	122	D11	167	A18		
33	A6	78	D3	123	D11	168	A18		
34	A6	79	A5	124	D11	169	A18		
35	B4	80	D5	125	D11	170	A18		
36	C10	81	B12	126	NO CONN	171	NO CONN		
37	D4	82	NO CONN	127	A32	172	NO CONN		
38	C11	83	NO CONN	128	C12	173	NO CONN		
39	D5	84	NO CONN	129	A32	174	NO CONN		
40	C5	85	D4	130	A32	175	A12		
41	D4	86	NO CONN	131	A32	176	C12		
42	D4	87	A11	132	A32	177	A12		
43	A12	88	A12	133	A32	178	C11		
44	A5	89	A11	134	A32	179	C11		
45	B4	90	A12	135	A31	180	C11		

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Figure 25.1 (U). Continued (sheet 6 of 7).

## NOTES:

- ALL VALUES ARE EXPRESSED IN OHMS OR MICROFARADS UNLESS OTHERWISE INDICATED
- REFER TO TM9-1430-254-20.
- IN SYSTEMS 1001-1048, F1 IS 2 AMPS
- UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:  
 J1 - 15, 17, 19, 20, 21, 22, 23, 24, 26  
 J2 - 15, 17, 19, 20, 21, 22, 23, 24, 26  
 J3 - 16, 18, 37,  
 J4 - 14, 18,  
 J5 - 15, 22, 24, 26  
 J10 - 6, 7, 9, 11  
 J11 - 4, 7, 9, 11  
 J12 - 4, 5, 7, 9, 11, 12,  
 J17 - 4,  
 J18 - 4, 5, 7, 8, 9, 11, 14, 15  
  
 J27 - 3, 5, 7, 8, 9, 10, 11,  
 J28 - 1, 3, 4, 5, 6, 10, 12  
 J29 - 2, 4, 8, 10, 12  
 J30 - 4, 10, 12  
 J31 - 2, 4, 6, 10, 12  
 J32 - 2, 3, 4, 5, 7, 9, 11, 12  
 J33 - 1, 3, 4, 5, 7, 9, 10, 11, 12  
 J34 - 1, 3, 5, 7, 8, 9, 11, 12  
 J35 - 3, 4, 5, 7, 9, 10, 11, 12  
 J36 - 4, 10, 12  
 J37 - 1, 2, 3, 5, 6, 7, 9, 10, 11, 12  
 J38 - D, E, F  
 J39 - 9, 10, 11, 12  
 J51 - 1, 5, 10, 11, 12  
 J55 - 16  
 P56 - B, J, K, L, M, T, U  
 P57 - E, N  
 P58 - A, B, D, F, H, L, M, P, R, U, V  
 P59 - E, F, N  
 P60 - B, C, D, H, J, K, L, P, R, U, V  
 S9 - 1, 2, 3
- VOLTAGE BETWEEN ANY TWO PHASES (A, B, OR C) IS 208 VOLTS AC. VOLTAGE BETWEEN ANY PHASE AND NEUTRAL IS 120 VOLTS AC
- IN SYSTEMS 1001-1286, 15-MINUTE DELAY TIMER 7614632 IS USED.
- REFER TO SCHEMATIC OF TRAILER MOUNTED DIRECTOR STATION 9985689 (GS-17582)
- RESISTORS REFERENCED TO THIS NOTE ARE INTEGRAL PARTS OF ASSOCIATED LAMP HOLDERS

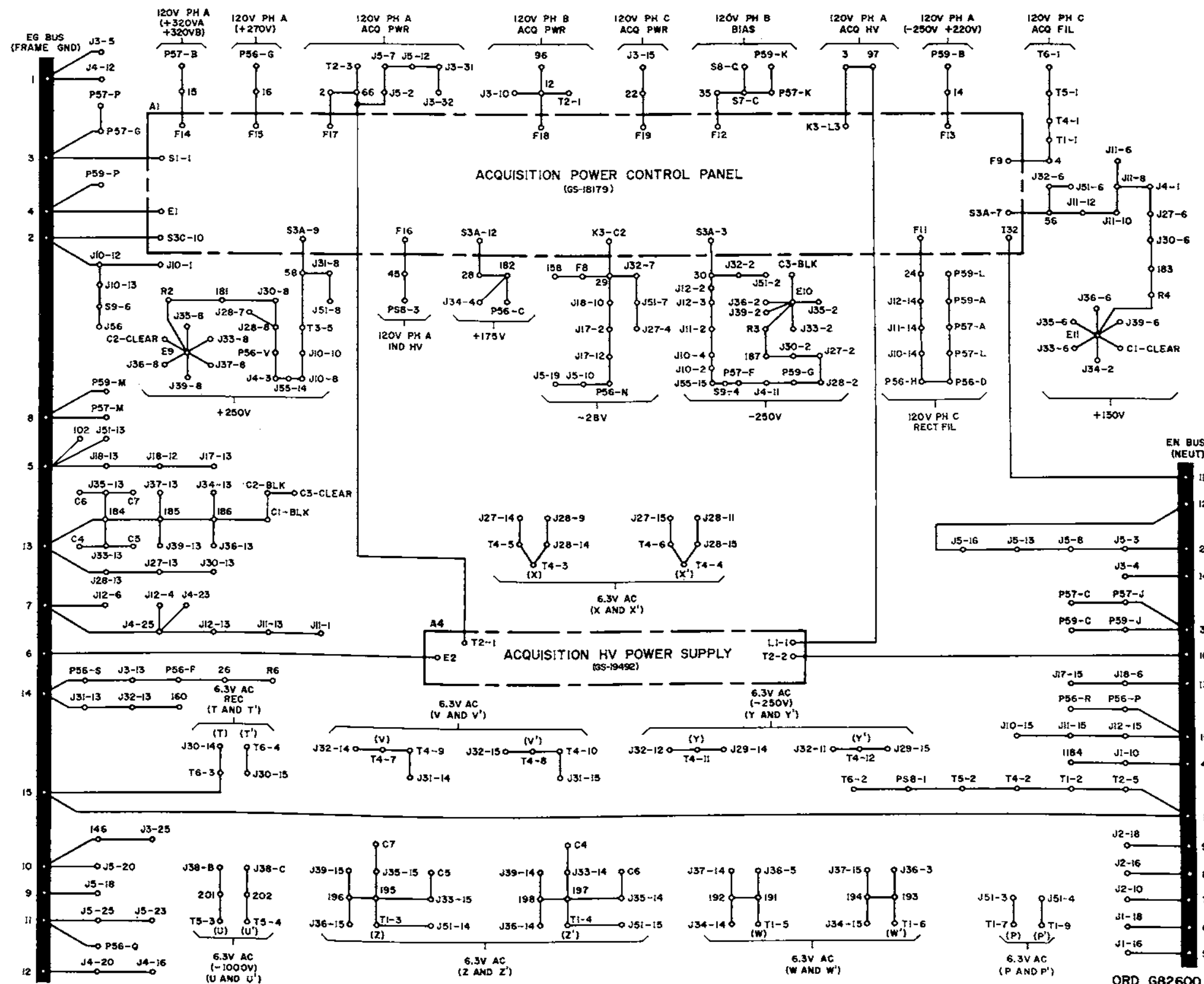


Figure 25.1 (U). Continued (sheet 7 of 7).

(U) Director Station Group 8513626—Apparatus List (With Auxiliary Acquisition Radar Modification)

(U) Director Station Group 8513626—Apparatus List (With Auxiliary Acquisition Radar Modification)—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
A1					8513518	GS-18179
A2					7620519	D-153948
A3					9142969	GS-58678
A4					9138109	GS-19492
A5					9140697	GS-17747
A6					7620552	D-154138
A7					9140697	GS-17747
A8					9137641	GS-57290
A9					9137641	GS-57290
A10					9986425	GS-18046
A11					9988748	GS-65982
A12					8513387	GS-18047
A13					8512062	GS-18060
A14					9985613	GS-65861
A15					9136410	GS-57302
A16					7621810	D-153885
A17					9985537	None
J1					8531071	
J2					8531071	
P1					8177072	
R1	270	5	½		MS35043-73	
R2	47	5	½		MS35043-55	
R3	270	5	½		MS35043-73	
R4	150	5	½		MS35043-67	
R5	110	5	½		MS35043-64	
R6	150	5	½		MS35043-67	
R7	100	5	½		MS35043-63	
R8	220	5	½		MS35043-71	
R9	100	5	½		MS35043-63	
R10	91	5	½		MS35043-62	
R11	360	5	½		MS35043-76	
R12	91	5	½		MS35043-62	
R32	91	5	½		MS35043-62	
R33	360	5	½		MS35043-76	
R34	91	5	½		MS35043-62	
R35	100	5	½		MS35043-63	
R36	1000	5	½		MS35043-87	
A18					8519066	GA-10343
A19					8513331	GS-18051
A20					8513287	GS-18052
A21					9137927	GS-56927
A22					9137928	GS-56928
A23					9007731	GS-18049
A24					8919066	GS-10352
C1	50 $\mu$ f	+50-10		400	8519269	
C2	50 $\mu$ f	+50-10		400	8519269	
C3	50 $\mu$ f	+50-10		400	8519269	
C4	0.01 $\mu$ f	10		400	9000751	
C5	0.01 $\mu$ f	10		400	9000751	
C6	0.01 $\mu$ f	10		400	9000751	
C7	0.01 $\mu$ f	10		400	9000751	
C8	50 $\mu$ f	+50-10		400	8519269	
EA					8009011	
EB					8009011	
EC					8009011	
F1	1 amp				MS90082-1	

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
F4	0.5 amp				432642	
F5	0.5 amp				432642	
F6	0.5 amp				432642	
F7	1/16 amp				MS90078-18	
F8	0.5 amp				432642	
F9	3.2 amp				9007312	
I1					7605718	
J1					7632526	
J2					7632526	
J3					7632529	
J4					7632527	
J5					7632527	
J6					7606490	
J7					9000848	
J8					7606490	
J9					7606490	
J10					7599367	
J11					7599367	
J12					7599367	
J17					7599367	
J18					7599367	
J19					7599662	
J20					7599662	
J21					7599662	
J22					7599662	
J23					7599662	
J24					7599662	
J25					7599662	
J26					7599662	
J27					7599367	
J28					7599367	
J29					7599367	
J30					7599367	
J31					7599367	
J32					7599367	
J33					7599367	
J34					7599367	
J35					7599367	
J36					7599367	
J37					7599367	
J38					8519237	
J39					7599367	
J40					7599662	
J41					8531071	
J42					8531071	
J43					8531071	
J44					8531071	
J45					9003874	
J46					8519232	
J47					8519232	
J48					9142989	
J49					8519232	
J50					9003874	
J51					7599367	
J52					7599662	
J53					7599662	

(U) Director Station Group 8513626—Apparatus List (With Auxiliary Acquisition  
Radar Modification)—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
J54					9142998	
J55					7593665	
J56					8175215	
J57					7599662	
J58					7599662	
J59					7599662	
J62					7599662	
J63					7599662	
J64					7599662	
P15					MS35170	
P19					MS35170	
P30					MS35170	
P32 thru P38					7602336	
P39 thru P45					MS35170	
P46					7602336	
P47 thru P55					MS35170	
P56					7602231	
P57					7605635	
P58					7611376	
P59					7605635	
P60					7611377	
P61 thru P73					MS35170	
P74					7601757	
P75, P76					MS35170	
P77					7602336	
P78 thru P84					MS35170	
P85					7602336	
P86 thru P89					MS35170	
P90					8177072	
P91					MS35170	
P92					MS35170	

(U) Director Station Group 8513626—Apparatus List (With Auxiliary Acquisition  
Radar Modification)—Continued

Ref desig	Value	Mfr's rating			Type, part or drawing no.	Remarks
		Tol ± %	Watts	Volts		
P94					MS35170	
P95					MS35170	
P96 thru P107					MS35170	
P125					7602336	
P132					MS35170	
P133					MS35170	
P135					MS35170	
P136					MS35170	
P138					MS35170	
P139					MS35170	
P140					MS35170	
R1	2500	10	2		8175592	
R2	10	5	2		MS35045-39	
R3	10	5	2		MS35045-39	
R4	10	5	2		MS35045-39	
R6	2800	5	37		9000824	
S4					7602749	
S5					7602749	
S6					7602749	
S7					8017760	
S8					7602749	
S9					MS25100	
T1					7605345	
T2					8011006	
T3					7605549	
T4					8519069	
T5					8519067	
T6					8015382	
Z60					9013067	
Z61					9008118	

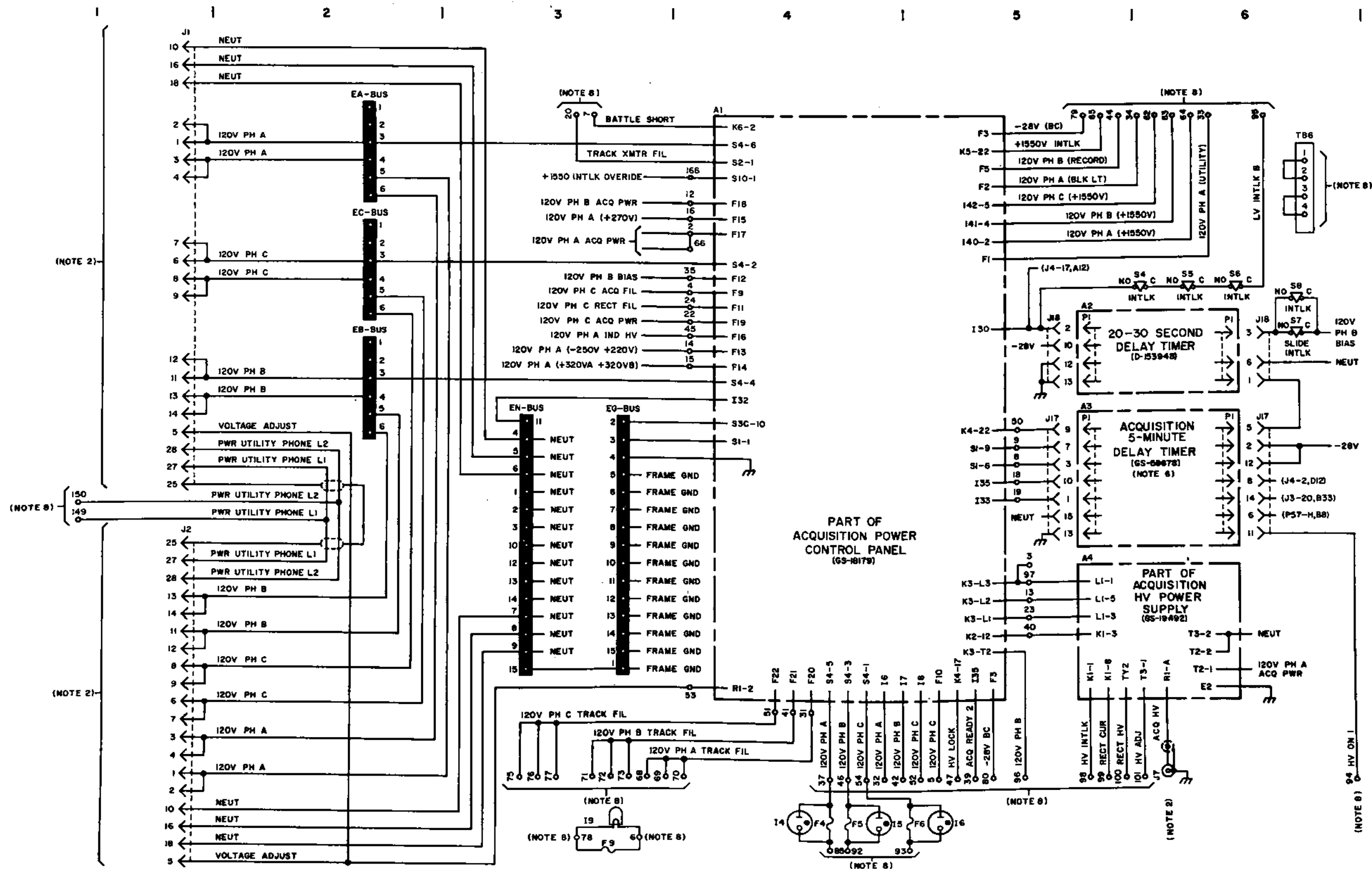


Figure 25.2 (U). Director station group 8513626 (with antijam display capability)—schematic diagram (sheet 1 of 8).

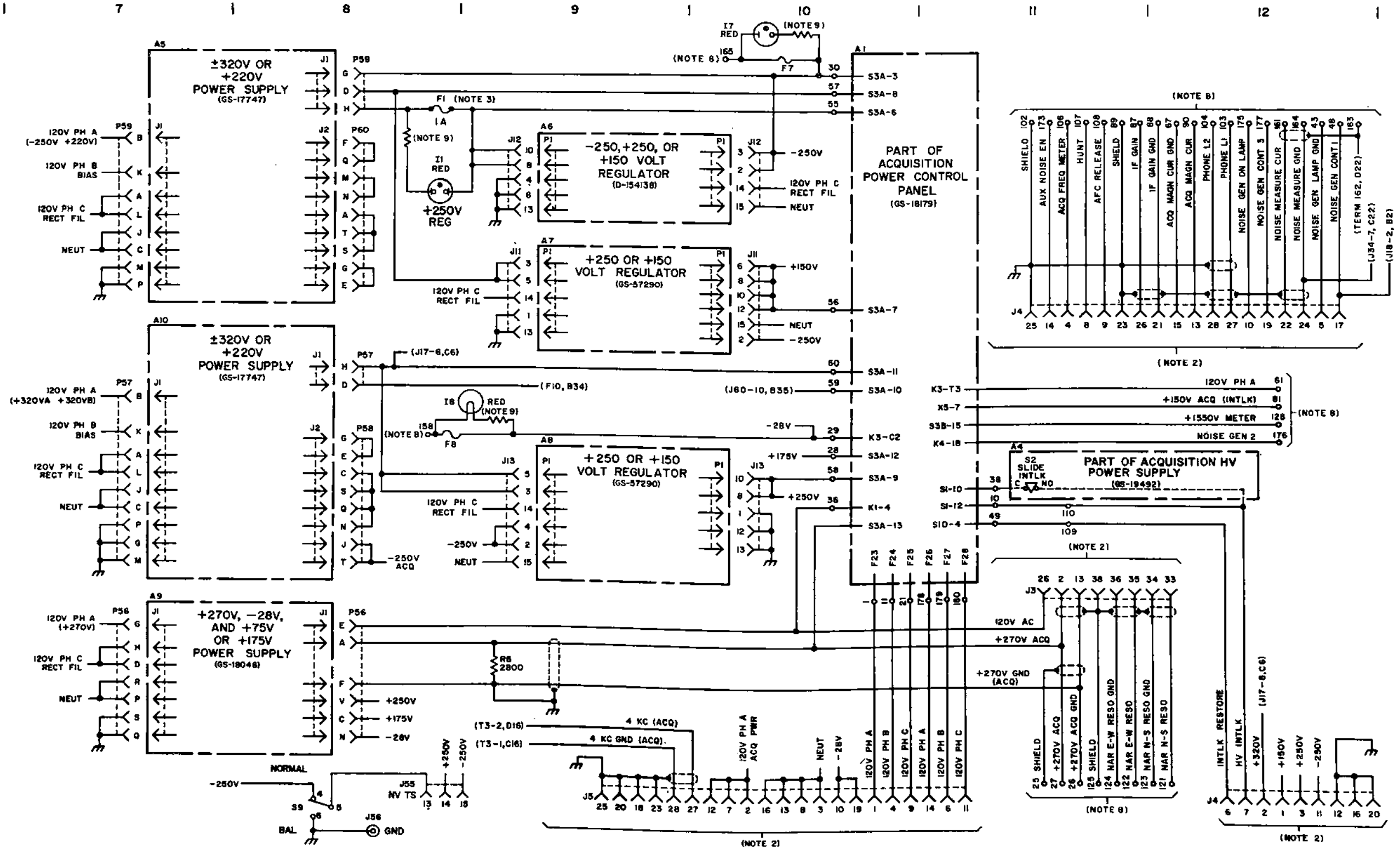


Figure 25.2 (U). Continued (sheet 2 of 8).

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